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AN EXPERIMENTAL INVESTIGATION DESIGNED TO EXAMINE THE EFFICACY OF INSTRUCTING ELEMENTARY AND MIDDLE SCHOOL TEACHERS IN STRESS MANAGEMENT TECHNIQUES
AN EXPERIMENTAL INVESTIGATION DESIGNED TO EXAMINE THE EFFICACY
OF INSTRUCTING ELEMENTARY AND MIDDLE SCHOOL TEACHERS IN
STRESS MANAGEMENT TECHNIQUES

DISSERTATION
Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy in the
Graduate School of The Ohio State University

By
Terry Lee Wilson, B.A., M.A.

The Ohio State University
1982

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ACKNOWLEDGEMENTS

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FIELDS OF STUDY

Major Field:  Counselor Education

Minor Field:  Counseling Psychology
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td></td>
</tr>
<tr>
<td>Purpose of Study</td>
<td>6</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>7</td>
</tr>
<tr>
<td>Assumption</td>
<td>11</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>11</td>
</tr>
<tr>
<td>Limitations</td>
<td>13</td>
</tr>
<tr>
<td>Summary</td>
<td>14</td>
</tr>
<tr>
<td>II. REVIEW OF RELATED LITERATURE</td>
<td>15</td>
</tr>
<tr>
<td>Introduction</td>
<td>15</td>
</tr>
<tr>
<td>Incidence of Teacher Anxiety</td>
<td>17</td>
</tr>
<tr>
<td>Sources of Teacher Anxiety</td>
<td>24</td>
</tr>
<tr>
<td>Concerns of Teachers as a Developmental</td>
<td>24</td>
</tr>
<tr>
<td>Progression</td>
<td></td>
</tr>
<tr>
<td>Environmental Factors, Declining</td>
<td></td>
</tr>
<tr>
<td>Enrollment, and the Nature of the</td>
<td></td>
</tr>
<tr>
<td>Public School System as Sources</td>
<td>27</td>
</tr>
<tr>
<td>New York State United Teachers Stress Survey</td>
<td>29</td>
</tr>
<tr>
<td>Chicago Teachers Union Stress Survey</td>
<td>30</td>
</tr>
<tr>
<td>Sources of Stress Among British Teachers...</td>
<td>36</td>
</tr>
<tr>
<td>Methods Used to Reduce Teacher Anxiety</td>
<td>40</td>
</tr>
<tr>
<td>Teaching Skills Training and Relaxation</td>
<td></td>
</tr>
<tr>
<td>Skills to Reduce Teacher Anxiety</td>
<td>40</td>
</tr>
<tr>
<td>Dogmatism as a Defense Against Teacher</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>42</td>
</tr>
<tr>
<td>The Role of the Teacher in Reducing</td>
<td></td>
</tr>
<tr>
<td>Teacher Anxiety</td>
<td>44</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS (Continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Role of the Educational Leader in Reducing Teacher Anxiety</td>
<td>45</td>
</tr>
<tr>
<td>The Role of the School Counselor in Reducing Teacher Anxiety</td>
<td>46</td>
</tr>
<tr>
<td>The Role of Education Associations in Reducing Teacher Anxiety</td>
<td>48</td>
</tr>
<tr>
<td>Cognitive Approaches to Reducing Anxiety</td>
<td>49</td>
</tr>
<tr>
<td>Social Support as a Mechanism to Reduce Stress</td>
<td>54</td>
</tr>
<tr>
<td>Effects of Teacher Anxiety on Teacher and Student Behavior</td>
<td>62</td>
</tr>
<tr>
<td>Summary of Review of Literature</td>
<td>67</td>
</tr>
<tr>
<td>III. METHODOLOGY</td>
<td>69</td>
</tr>
<tr>
<td>Design</td>
<td>69</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>72</td>
</tr>
<tr>
<td>Data Collection Instruments</td>
<td>75</td>
</tr>
<tr>
<td>Schedule of Recent Experience</td>
<td>76</td>
</tr>
<tr>
<td>Reliability and Validity of the Schedule of Recent Experience</td>
<td>78</td>
</tr>
<tr>
<td>State-Trait Anxiety Inventory</td>
<td>79</td>
</tr>
<tr>
<td>Reliability and Validity of the State-Trait Anxiety Inventory</td>
<td>82</td>
</tr>
<tr>
<td>Taylor Manifest Anxiety Scale</td>
<td>84</td>
</tr>
<tr>
<td>Reliability and Validity of the Taylor Manifest Anxiety Scale</td>
<td>85</td>
</tr>
<tr>
<td>Discussion of Treatments</td>
<td>86</td>
</tr>
<tr>
<td>Rational Emotive Therapy</td>
<td>86</td>
</tr>
<tr>
<td>Professional Support Group</td>
<td>90</td>
</tr>
<tr>
<td>Control Group</td>
<td>91</td>
</tr>
<tr>
<td>Analysis of the Data</td>
<td>92</td>
</tr>
<tr>
<td>Summary</td>
<td>93</td>
</tr>
<tr>
<td>IV. PRESENTATION AND ANALYSIS OF DATA</td>
<td>94</td>
</tr>
<tr>
<td>Description of the Sample</td>
<td>95</td>
</tr>
<tr>
<td>Analysis of the Data</td>
<td>97</td>
</tr>
<tr>
<td>Presentation and Discussion of Instrument</td>
<td>97</td>
</tr>
<tr>
<td>Data Collected from Subjects</td>
<td>97</td>
</tr>
<tr>
<td>Statistical Analysis of the Data</td>
<td>108</td>
</tr>
<tr>
<td>Summary</td>
<td>109</td>
</tr>
</tbody>
</table>
## TABLE OF CONTENTS (Continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. SUMMARY, CONCLUSIONS, RECOMMENDATIONS</td>
<td>110</td>
</tr>
<tr>
<td>Summary of Study</td>
<td>110</td>
</tr>
<tr>
<td>Finding</td>
<td>113</td>
</tr>
<tr>
<td>Conclusions</td>
<td>113</td>
</tr>
<tr>
<td>Recommendations for Future Research</td>
<td>114</td>
</tr>
<tr>
<td>Summary</td>
<td>115</td>
</tr>
</tbody>
</table>

## APPENDIXES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Letter Inviting Participation in Study</td>
<td>116</td>
</tr>
<tr>
<td>B.</td>
<td>Schedule of Recent Experience</td>
<td>122</td>
</tr>
<tr>
<td>C.</td>
<td>State-Trait Anxiety Inventory</td>
<td>125</td>
</tr>
<tr>
<td>D.</td>
<td>Taylor Manifest Anxiety Scale</td>
<td>128</td>
</tr>
<tr>
<td>E.</td>
<td>Information Sheet</td>
<td>132</td>
</tr>
<tr>
<td>F.</td>
<td>Subjects' Scores on the Schedule of Recent Experience, A-Trait Scale of the</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>State-Trait Anxiety Inventory, and the Taylor Manifest Anxiety Scale</td>
<td></td>
</tr>
<tr>
<td>G.</td>
<td>Outline of Sessions for Rational Emotive Therapy Group</td>
<td>137</td>
</tr>
<tr>
<td>H.</td>
<td>Outline of Sessions for Professional Support Group</td>
<td>141</td>
</tr>
<tr>
<td>I.</td>
<td>RET Homework Assignment</td>
<td>144</td>
</tr>
<tr>
<td>J.</td>
<td>Human Subjects Review Committee Letter of Approval</td>
<td>147</td>
</tr>
</tbody>
</table>

## REFERENCE NOTES                                                    | 149  |

## LIST OF REFERENCES                                                | 150  |
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rank Order of Events by Mean Stress Values and Attendant Data</td>
<td>32</td>
</tr>
<tr>
<td>2</td>
<td>Potential Forms of Social Support</td>
<td>56</td>
</tr>
<tr>
<td>3</td>
<td>Sample Population and Response Rate to Letter of Invitation</td>
<td>72</td>
</tr>
<tr>
<td>4</td>
<td>Tabulation of Items Checked by 90 Respondents to Letter of Invitation</td>
<td>73</td>
</tr>
<tr>
<td>5</td>
<td>STAI Means, Standard Deviations and Alpha Reliabilities for Undergraduate Students</td>
<td>81</td>
</tr>
<tr>
<td>6</td>
<td>Test-Retest Reliability for College Undergraduates</td>
<td>82</td>
</tr>
<tr>
<td>7</td>
<td>Subjects' Teaching Assignments by Grade Level and Subject Area</td>
<td>95</td>
</tr>
<tr>
<td>8</td>
<td>Subjects' Years of Teaching Experience</td>
<td>96</td>
</tr>
<tr>
<td>9</td>
<td>Age Range of Subjects</td>
<td>96</td>
</tr>
<tr>
<td>10</td>
<td>Means and Standard Deviations of Schedule of Recent Experience</td>
<td>97</td>
</tr>
<tr>
<td>11</td>
<td>Means and Standard Deviations of A-Trait</td>
<td>98</td>
</tr>
<tr>
<td>12</td>
<td>Means and Standard Deviations of TMAS</td>
<td>98</td>
</tr>
<tr>
<td>13</td>
<td>Difference Between Groups on A-Trait Scale and Taylor Manifest Anxiety Scale Adjusted for Schedule of Recent Experience and A-Trait Scale and Taylor Manifest Anxiety Scale Pretests</td>
<td>109</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Model of Stress</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>RET A-Trait Scale Scores</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>PSG A-Trait Scale Scores</td>
<td>101</td>
</tr>
<tr>
<td>4</td>
<td>Control A-Trait Scale Scores</td>
<td>102</td>
</tr>
<tr>
<td>5</td>
<td>RET TMAS Scores</td>
<td>103</td>
</tr>
<tr>
<td>6</td>
<td>PSG TMAS Scores</td>
<td>104</td>
</tr>
<tr>
<td>7</td>
<td>Control TMAS Scores</td>
<td>105</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Teacher stress has reached epidemic proportions in some school districts and it is rapidly increasing in others (Sparks, 1979; Swick & Hanley, 1980). Teaching has become such a stressful profession that many educators are experiencing physical and/or emotional health problems (McGrew, 1978). A teacher's union in the midwest reported that over half of the teachers responding to a stress survey felt they had suffered physical and/or mental illness as a result of their teaching jobs (Chicago Teachers Union, 1978).

- Fifth grade teacher Betty Robinson missed seven weeks of school late last year--the result of "mental fatigue."
- Georgia Thompson has colitis and 33 third graders to work with daily.
- John Stone yells at his eleventh grade chemistry class with the least provocation.
- Louise Turner resigned as a middle school social studies teacher to become a flight attendant with a major airline.

What is it about these teachers or the teaching profession that has caused them to exhibit serious physical and/or emotional disorders? They each entered teaching with all the excitement and enthusiasm expected of beginning teachers. What happened? What caused these teachers to exchange their vibrant enthusiasm for irritability, psychosomatic illness, and indifference to or dislike of teaching?
There are many factors that contribute to the development of such negative occurrences (Swick & Hanley, 1980). During the past decade the teaching profession has been influenced by: (a) increased community pressure for more services, e.g., substance abuse education, sex education, programs in death and dying; (b) increased pressures at local, state, and federal levels for accountability, e.g., mastery learning, student- and teacher-competency testing, and management-by-objectives; (c) state and federal regulations, e.g., the mainstreaming of children with special needs into the regular classroom, pull-out programs, breakfast and lunch programs; (d) increased professional demands, e.g., classroom management and student discipline, knowledge explosion, research into students' learning styles, desegregation activities, increased activity in inservice programming; as well as (e) parent/citizen involvement, e.g., public neglect to provide economic support and public censorship of teaching materials. The increased demands brought on by these changes have often resulted in negative stress situations.

In a similar manner, many teachers have confronted a variety of personal pressures that are directly or indirectly a result of changes in their professional lives. Dwindling teacher salaries (when adjusted for inflation), more stringent tenure criteria, increased demands on teacher time, in addition to the constant coping with the challenging problems of relating to people and encouraging the growth of individual students have created havoc with the personal/professional demands on their lives. Thus it is no surprise that teachers are concerned about
the stress with which they live and its effects on them personally and professionally.

Whether or not we suffer personally from the effects of stress, we all pay for it. Stress can no longer be considered just a personal problem. In 1976, stress surpassed the common cold as America's most prevalent health problem (Rummel & Rader, 1978). As such it is the number one cause of heart disease. It has been directly related to such physical problems as hypertension, migraine headaches, fever, colitis, ulcers, allergies, excess clotting of the blood, and some forms of cancer and arthritis. Moreover, it is also associated with depression.

All of this has an impact on the price we pay in terms of personal health and health care costs. Furthermore, stress affects the price we pay for consumer goods. It has been estimated that the cost of stress-related problems to industry is in excess of $100 billion a year (Sokoloff, 1979). We even feel the costs of stress in terms of the amount of taxes that we pay; the federal government is paying more and more of the nation's health care costs. In 1950, the government's share of the cost was 27 percent. In 1974, that share had risen to 40 percent (Herzlinger, 1978).

Occupational stress has been recognized by business and industry as one of the most critical personnel problems facing the nation's work force (French & Caplan, 1973; Kahn, Wolfe, Quinn, & Snoke, 1966). Since the mid-60's business and industry has been looking more closely at the impact of occupational stress and its effects on personnel as it
relates to production efficiency—profit and loss. Unfortunately, the public sector has lagged behind in its concern for the stress that personnel experience on the job. With the increasing number of public employee contracts negotiating for sick-leave provisions and with a growing number of employees choosing health-related early retirement, public sector employers are beginning to recognize that their investment in the human resources is vital.

In the field of education, stress is also an occupational hazard. Absenteeism among teachers in the United States is rapidly increasing (Elliott & Manlove, 1977; Toch, 1981). This may be partly as a result of more generous sick leave policies; but it is also an index of the effects of increased stress on the physical and mental well-being of teachers in many schools (Toch, 1981). Douglas (1976) provides some evidence for this. He conducted a study designed to examine the correlation between various socio-psychological factors that are generally considered to be sources of teacher stress and teacher absenteeism. By documenting the antecedents, concomitants, and effects of role stress he found that nine variables predicted teacher absenteeism. These nine variables included role conflict, years of teaching experience, holding summer jobs, working in inner-city versus suburban schools, academic degree (BS, MA, or MA+), psychasthenia, the Cornell Index Score (a single score locating the individual on a scale of increasing neurotic and psychosomatic disturbance), hypochondriasis, and job satisfaction.
Another significant problem in education in the U.S. is that of teacher dropout. In 1970, Stinnet reported an estimated ten percent annual dropout rate; with nearly 50 percent of U.S. teachers leaving the profession within ten years of their entering. Of that 50 percent, most left within the first two or three years of teaching. Cedoline (1982) states that within the past ten years, the rate of job turnover in large educational organizations appears to be growing rapidly. Further evidence regarding increased teacher turnover is found in one of the questions in the Fourteenth Annual Gallup Poll of the Public's Attitudes toward the Public Schools. It begins with, "Public school teachers are leaving the classroom in great numbers" (Gallup, 1982). Although the explanation of teacher dropout is complex and requires sophisticated analysis, it is reasonable to view stress as one of the precipitating factors (Phillips & Lee, 1980). Illustrative of this is work done by Tosi and Tosi (1970) indicating that high degrees of role conflict and ambiguity are related to teacher turnover.

In terms of both absenteeism and turnover, Truch (1980) reports that through these two factors, as well as poor performance and waste, teacher distress costs at least $3.5 billion annually.

Considerable research into teacher stress has been conducted over the past five decades. A wealth of data concerning the incidence and sources of teacher stress is currently available. Also, studies of a number of occupational groups are exploring the relationship between the experience of stress and both the resulting short term and long term effects. The major focus for further research into teacher stress
is clearly that of examining coping strategies teachers may employ in attempting to reduce the effect of stressors. Little attention has been given to this area (Keavney & Sinclair, 1978; Kyriacou, 1980).

**Purpose of Study**

The purpose of this study was to examine the efficacy of instructing teachers in stress management techniques. Two approaches were used in the study. The first approach, Rational Emotive Therapy, was selected in light of the theory regarding stress. Cognitions are seen as playing a vital role in determining how the individual views a potential stressor. It is the individual's thoughts about self and the situation and the consequences for acting that influence how the situation is viewed and what behavior is selected. Thus, it is at the appraisal stage where intervention is appropriate. Teaching the individual how to examine and restructure the cognitions involved in appraising the situation will enhance the individual's ability to cope more effectively.

The second approach, social support and specifically Professional Support Group, was selected for a number of reasons. "The study of social support in relation to stress and health is a rapidly developing, but not yet well-developed, area of theory and research....[having] important implications for practical efforts to reduce stress, protect health, and enhance the quality of working life" (House, 1981, p. xi). Teaching has been viewed as lonely and isolated (Knoblock & Goldstein, 1971; Robert, 1974; Sarason, 1971). Further, teachers must contend with the myth of the good teacher (Canter &
Canter, 1976). Essentially, this myth states that a good teacher should be able to handle all problems within the confines of his/her classroom. This means that if the teacher is competent s/he should never have to go to someone for assistance. No one teacher, however, is capable of working successfully without support. This myth places a burden of guilt on teachers who encounter problems because if they were really "good" they would not have these problems. These feelings of inadequacy and guilt tend to keep teachers from seeking the support and assistance of others.

Specifically, the study sought to answer the following question: Is there a difference in measured anxiety between teachers who receive instruction in the principles of Rational Emotive Therapy as a stress management technique, teachers who participate in a Professional Support Group as a stress management technique, and teachers who receive no instruction?

Significance of the Study
"Many educators would agree that teacher 'personality' and 'mental health' as they are reflected in classroom behavior are important. Some might even consider these characteristics [and the resultant classroom climate] more important than a teacher's knowledge of the subject matter and methods of teaching" (Coates & Thoresen, 1976, p. 159). Too many times, however, the emotional state of a classroom, as affected by the teacher's mental health and anxiety level, is given little priority. Further, the exact effect of the teacher's mental
health and anxiety level on individual students is unknown (Coates & Thoresen, 1976), even though some researchers believe that everything that the teacher does or says could have a significant effect on the pupils (Pine, 1975). Therefore, positive mental health is critical for teachers because of the authority position they hold in the classroom and the possible influence they have on students (Miller & Wiltse, 1979).

Although much of the research on the mental health of teachers was conducted in the 1930's and 1940's, more current literature indicates that this problem still exists and no solution has been found. This may result in part from the fact that many educators are unwilling to face this problem, noting that teachers are as mentally stable as people in other professions and have no greater incidence of mental illness (Miller & Wiltse, 1979). Even though this may be true, the issue of teacher mental health and mental illness is overlooked. Research indicates that if the conservative estimate of nine percent is used to classify teachers as being maladjusted, the problem may be greater than would be expected (Miller and Wiltse, 1979). According to Brenton (1971) this figure of nine percent indicates that 180,000 of the country's more than two million elementary and secondary school teachers have serious emotional problems. If we assume a minimum class size of 25 and that each teacher sees one class (junior and senior high school teachers see several classes), this means that more than four and a half million students are exposed each year to seriously maladjusted teachers.
Although it was not within the scope of this study to examine the "personality" of teachers, and more specifically their emotional adjustment and mental health, it was hoped that through this study knowledge would be gained regarding what can be done to assist teachers in developing and/or maintaining a degree of mental health, i.e., less distress and/or anxiety, which may enhance their work in the classroom.

Such a study is necessary because according to Coates and Thoresen (1976, p. 175):

1. Anxiety appears to occur with considerable frequency among beginning and experienced teachers.

2. Teacher anxiety appears to be associated with a variety of personal, social, and physical conditions (ranging from concern with one's adequacy as a teacher and discipline problems to the availability of materials and facilities).

Regarding studies investigating the efficacy of various interventions in reducing teacher anxiety, Coates and Thoresen (1976, p. 170) state that the findings of these studies are "contradictory and ambiguous." However, a promising technology of stress and tension management is currently available (Coates and Thoresen, 1976). Cognitive rational restructuring is one approach offering promising possibilities. Such studies should test a combination of techniques that help teachers pinpoint their anxiety, examine the antecedents and consequences of their anxiety, and reduce their stress in various ways. Training in stress reduction techniques is not designed to produce teachers who are desensitized to the point of becoming inactive or tolerating unreasonable or unhealthy environments. This is especially true when we consider the fact that, according to Fuller and Brown
(1975), many teachers' anxieties may be entirely appropriate considering the harsh conditions in which they must work. Rather, the goal is to teach the teacher the skills of managing personal stress and tension that might otherwise interfere with effective teaching, along with instrumental behaviors for changing and modifying the stress-producing features of school environments. Generally, this study attempted to achieve the above goal and add to the research on teacher anxiety, which is still at a "very early stage of development" (Keavney & Sinclair, 1978, p. 273).

Hans Selye in his preface to The Stress of Life (1976) says that "there is [a] type of evolution which takes place in every person during his own lifetime from birth to death: this is adaptation to the stresses and strains of everyday existence. Through the constant interplay between his mental and bodily reactions, man has it in his power to influence this...type of evolution to a considerable extent, especially if he understands its mechanism and has enough will power to act according to the dictates of his human intellect" (p. xvi). Inasmuch as teachers are human beings before they are teachers, they, too, must learn to adapt to the stresses and strains of everyday existence. This adaptive evolution for teachers is a matter of significance for the teaching profession. Through increasing the body of knowledge on teacher anxiety generally and on teachers' coping strategies specifically, teachers may be freer to perform more competently and effectively.
Assumption

The following assumption was made in the conduct of this study:

People are capable of accurately completing self-report scales regarding the degree of stress or anxiety that they experience. Despite their brevity and simplicity, such scales have considerable utility in the assessment of current levels of anxiety and of changes in anxiety under given experimental treatment (McReynolds, 1968).

Definition of Terms

The following terms and their definitions were used in this study.

**Anxiety.** "Unpleasurable affect consisting of psychophysiological changes in response to an intrapsychic conflict" (Freedman, Kaplan, & Sadock, 1972, p. 753).

**Distress.** A negative stress response.

**Measured anxiety.** Raw scores on the A-Trait scale of the State-Trait Anxiety Inventory and on the Taylor Manifest Anxiety Scale served as indicators of anxiety level in this study. They were used as points of comparison both within and between the three treatment groups that comprised the study's sample.

**Professional Support Group (PSG).** "...a small group of professionals with a common area of interest who meet periodically to learn together and to support one another in their ongoing professional development. The support group offers an occasion to expand one's thinking, be intellectually challenged, and gain new information and new insights related to one's professional involvement....[It also] offers an occasion to learn new methods, practice old and new skills,
solve problems, and receive suggestions—[thus] providing concrete, practical help in one's day-to-day professional work....[Finally] the support group provides a place where one can feel less alone, where discouragements can be shared and successes appreciated and where confidence and energy can be renewed" (Kirschenbaum & Glaser, 1978, p. 3).

Rational Emotive Therapy (RET). A cognitive-behavior psychotherapy system having as its primary tenet the belief that "it is possible to achieve maximum actualization of human potential through the use of cognitive control of illogical emotional responses. The theory embraces the assumption that man is capable of both rational and irrational thoughts which are not separated, or different from emotions" (Morris & Kanitz, 1975, p. 8). The principles employed in RET are simply stated in terms of A-B-C-D-E as follows:

A - external event
B - self-verbalizations regarding the external event and based on the individual's irrational beliefs (iB's) or rational beliefs (rB's)
C - consequent affective emotion
D - disputing iB's
E - cognitive/behavioral effect of disputing iB's

Recent life experience. Quantitative and qualitative data about subjects' past twelve-month life-style and history collected from the Schedule of Recent Experience. Research using this instrument suggests that the more life change that occurs, the greater the likelihood of illness.
Stress. The mind/body response to any demand.

Stressor. A demand which produces stress.

Limitations

The following limitations were identified for this study:

1. The study was limited to a small sample. A total of 28 elementary and middle school teachers elected to participate after receiving written and oral information regarding the purpose and nature of the study. These teachers were part of a random sample of 250 elementary and middle school teachers who received written information regarding the purpose and nature of the study. At the onset of the study all teachers were working full-time in a major, midwestern, desegregated, urban public school system. The findings of this study are generalizable to the population studied.

2. Subjects were able to receive graduate credit for participating in the study; this may have influenced their willingness to participate.

3. This study was conducted during the spring with pretests being administered one week prior to the beginning of spring break, treatment beginning the first week following spring break, and posttests being administered one week before the end of the school year.

4. Instrumentation was based on self-reports only; no physiological measures of stress were used.
5. The amount of time spent during treatment consisted of six 2-hour weekly sessions. The complexity of treatments used--Rational Emotive Therapy and Professional Support Group--probably necessitated additional time permitting subjects to assimilate new information and strategies.

**Summary**

The preceding sections have introduced the problem, purpose, and significance of this investigation. Further, one assumption made in the conduct of this study was stated along with a list of terms and their definitions as used in the study. Finally, the limitations were identified.
CHAPTER II
REVIEW OF RELATED LITERATURE

Introduction

As stated in Chapter I, Significance of the Study, it is not within the scope of this study to generally examine all the literature regarding teacher personality and specifically that of emotional adjustment and mental health. However, one area of this topic that is of particular importance to this study is that of teacher anxiety.

Teacher anxiety has been variously referred to or equated with "problems," "reactions," "needs," "concerns," and "stresses" (Coates & Thoresen, 1976; Fuller, 1969; Thompson, 1963)—both specified and unspecified—i.e., "free-floating anxiety." There are those who question the equivalence of such terms. Therefore, in the investigation of teacher anxiety, a problem arises because of the failure of researchers to develop their studies from within a coherent theoretical framework (Keavney & Sinclair, 1978). The present study has been developed from the theoretical construct in Figure 1. This model is based on the belief that the teacher and the school environment are in continuous interaction that results in calls for action or adaptive demands that may produce stress. (Other "environments" that the teacher may experience may also be interacting with the teacher and his/her school environment.) Although teachers may experience considerable physical stress at times, the stress
problems of most will be more psychological than physical in nature (Phillips & Lee, 1980). In other words, it is not necessarily the incidence of "real" or actual violence in schools that contributes to teacher stress; rather, it is the fear of, or cognitions regarding, violence that leads to stress and possibly anxiety.

Figure 1. Model of Stress

1 Person-Environment Interaction
In Modern Synopsis of Psychiatry (1972) anxiety is defined as an "unpleasurable affect consisting of psychophysiological changes in response to an intrapsychic conflict" (p. 753). Further, anxiety is described as a diffuse, unpleasant, often vague feeling of apprehension, accompanied by one or more recurring bodily sensations. It is an alerting signal that warns of impending danger and enables a person to take measures to deal with a threat. In anxiety, the threat may be known/unknown, internal/external, vague/specific, past-/present-/future-time oriented. Regardless, the threat is seen as conflictual in origin. The stimuli that trigger anxiety are referred to as stressors. An external event, such as a loss of a job, or an internal conflict, such as the desire to be aggressive, can be called a stressor if the person perceives it as such and experiences difficulty in coping with it. Whether an event is seen as distressful or not depends then on the nature of the event, including the perception of the event, and on the person's resources, defenses, and coping mechanisms (p. 330).

With the above introductory remarks in mind, this review of the literature has been divided into four areas: (a) the incidence of anxiety among classroom teachers, (b) the causes or sources of this anxiety; (c) the methods used to reduce anxiety among teachers; and (d) the effect of teacher anxiety on teacher and student behavior.

**Incidence of Teacher Anxiety**

Investigations into the incidence of teacher anxiety have been considerable over the past five decades. In a survey of 600 teachers
Hicks (1933) found that 17 percent were "unusually nervous" while another 11 percent had suffered from nervous breakdowns.

Randall (1951) studied the lengthy absences of teachers during 1949-1950 and found that of the 1,036 absences in excess of 10 days, almost 10 percent were for "nervous conditions," e.g., fatigue, prolonged menstrual disorders, and situational reactions.

The 1938 report of a survey conducted by the Department of Classroom Teachers of the National Education Association (NEA) revealed that 37.5 percent of their nationwide sample of 5,150 teachers indicated that they had worries intense enough to interfere with sleep, efficiency as a teacher, and physical health. An NEA report in 1951 showed 43 percent of a sample of 2,200 elementary and secondary school teachers were working under considerable strain and tension. A similar report in 1967 showed 16.2 percent of 2,290 teachers surveyed were working under considerable strain while another 61.7 percent were working under "moderate" strain, a response alternative not available in the 1951 questionnaire. Further evidence of teacher unhappiness among teachers was obtained by the NEA in 1957 through a nationwide survey of 5,602 teachers. It was found that 15 percent were so unhappy in their work that if given the opportunity to start over they would not choose teaching as a career, and another 11.7 percent were doubtful whether they would go into teaching again. A recent NEA teacher opinion poll found that "45% of the teachers surveyed nationwide would not choose teaching as a profession again. One of the reasons they give for this is stress" (Muse, 1981, p. 45).
The 1977 survey conducted jointly by the Chicago Teachers Union, the University of Illinois School of Public Health, and Roosevelt University found approximately 50 percent of the 4,934 Chicago public school teachers who responded indicating that they experienced physical illness as a result of their on-the-job life. Teachers reported experiences of physical assault, confrontations with colleagues and administrators, horrendous working conditions, and various stress related physical illnesses such as colitis, hypertension, sleeplessness, and ulcers. There were numerous respondents who wrote lengthy letters attached to their survey. Some even included photographs of their working conditions. Still others wrote in the margins in detail of the kinds of things they experienced day-to-day that they felt were the cause of their anxiety. (Chicago Teachers Union Survey, 1978, p. 1)

A further indication of "the prevalence of the feeling of stress of teachers in the [Chicago study] is clearly illustrated in response to the question, 'Do you consider your school a high stress school?' Of those who responded, 14 percent said no, 26 percent said sometimes, and a majority of 60 percent said yes. An overwhelming majority, 86 percent, rated their school as high stress at least some of the time" (Ginsberg & Bennett, 1981, p. 36).

In a nationwide survey conducted by Instructor magazine a majority of the 7,000 teachers responding to the question "Is teaching hazardous to your health?" felt the answer was "yes." About 87 percent of the respondents indicated there were "chronic health hazards" stemming from teaching. Another 27 percent felt that they had personally developed "chronic health problems" such as headaches, allergies, hypertension, and colds as a result of teaching, while 40 percent said that they took prescription drugs to treat the health problems developed as a result
of the hazards of teaching. Thirty-three percent of the teachers who responded claimed that most of the sick leave they had taken was related to stress or tension in the school (Harlan & Jerrick, 1976).

Feitler and Tokar (1982) collected data from more than 3,300 K-12 public school teachers. They found the results of their survey "...surprising. In general, teachers perceived their jobs to be less stressful than we anticipated" (p. 456). Only 16 percent of their sample considered their "job environments" as either "very stressful" or "extremely stressful." A majority of those responding, 76 percent, rated their jobs as being either "moderately stressful" or "mildly stressful," while 7 percent indicated their jobs were "not at all stressful." Feitler and Tokar also found that 19 percent of the high school teachers surveyed reported that their jobs were either very or extremely stressful compared to 16 percent for junior high and 13 percent for elementary school teachers. Of the urban teachers surveyed, 20 percent indicated that their jobs were very stressful compared to 16 percent in suburban and only 14 percent in rural schools.

Feitler and Tokar found age to be a critical factor in level of job-related stress:

Teachers in the 31-44 age range reported higher levels of stress than either teachers under 30 or those 45 years and older. Of those surveyed, 18% of the teachers between the ages of 31 and 44 reported that their jobs were either very or extremely stressful; whereas only 13% of those under 30 and 17% of those over 45 reported similar conditions. (pp. 457-458)

Of the 81 first-year teachers in Feitler and Tokar's sample, 16 percent indicated that their jobs were either very or extremely
stressful; 77 percent either moderately or mildly stressful; and 7 percent, "not at all stressful."

Approximately 350 teachers in the Feitler-Tokar sample were within five years of retirement. As a group, they reported a great deal of variation in job-related stress. Eighteen percent indicated that their jobs were either very or extremely stressful, while 12 percent reported that teaching was "not at all stressful."

A review of the research on teacher stress in the United Kingdom by Kyriacou and Sutcliffe (1977b) revealed that very few studies have attempted to measure the extent to which teachers feel they are experiencing stress. Kyriacou (1980) states that although "there is a great deal of anecdotal literature concerning teacher stress....the nature of much of the anecdotal literature makes it difficult to estimate the proportion of teachers who are experiencing a great deal of occupational stress compared with those who are experiencing little occupational stress" (pp. 113-114).

Illustrative of the anecdotal literature on teacher stress in the United Kingdom is an investigation conducted by Dunham (1976). He analyzed data that included the reports of 658 teachers in primary and secondary schools. These reports came from teachers attending conferences and courses who were asked to describe their stress situations, how they responded to them, and what recommendations they would make for reducing stress. Dunham's two major conclusions of his survey were that "more teachers are experiencing stress" and that "severe stress is being experienced by more teachers" (p. 19). Andrews
(1977) and Hargreaves (1978) also argue that teacher stress is on the increase.

A number of relatively recent studies conducted in the United Kingdom have focused on the level of job-related stress. A questionnaire survey of 3,588 probationary teachers in primary and secondary schools in England and Wales conducted by Taylor and Dale (1971) found 36 percent of the respondents indicating a general feeling of being under the stress of adapting to teaching (e.g., nervous fatigue).

Pratt (1976) reported some unpublished data from the 1972 National Survey of Health and Development. Those completing the survey were asked to respond to the question, "Would you say that in your work you were under severe nervous strain, some nervous strain, or little nervous strain?" There were 5,245 people in the total sample; of these, 227 were school teachers and 311 were "other professionals." Of the sample of teachers, 60.4 percent reported some or severe nervous strain. Of the "other professionals," 51.5 percent reported some or severe nervous strain while only 36.1 percent of the total sample reported some or severe nervous strain.

Four studies on teacher stress conducted by Kyriacou and Sutcliffe each examined the survey responses of a random sample of teachers in medium-sized (about 1,000 pupils) mixed comprehensive schools in England (Kyriacou & Sutcliffe, 1977a, 1978, 1979a, 1979b). Teachers in each study were asked to respond to the question, "In general, how stressful do you find being a teacher?" The date of the study,
the number of respondents, and the percentage of those who rated being a teacher as either very stressful or extremely stressful for each of the studies were as follows:


These four studies indicate that the proportion of teachers in medium-sized mixed comprehensive schools in England who are experiencing a great deal of job-related stress is somewhere between a fifth and a third. Kyriacou and Sutcliffe found no association between self-reported teacher stress and the biographical characteristics of sex, qualifications, age, length of teaching experience, and position held in the school. "This lack of association may indicate that personality rather than biographical characteristics are the more important determinants of individual differences in teacher stress" (Kyriacou, 1980, p. 115).

The research into the incidence of teacher anxiety amply suggests that teachers experience considerable strain, tension, or anxiety in the classroom. Although the incidence of anxiety may not be any greater than it is for other professional groups (Bentz, Hollister, & Edgerton, 1971), the possible negative effects that it might have on students could be serious. Kaplan (1959) estimated that anxiety may affect as many as 200,000 teachers and through them 5 million
students--this, based on minimum incidence statistics and pupil-teacher ratios in 1957!

Sources of Teacher Anxiety

Concerns of Teachers as a Developmental Progression

Fuller (1969, 1974) has conceptualized the concerns of teachers as a developmental progression: the preteaching phase is characterized by nonconcern, the beginning teacher phase (including student teaching) by concerns about self-adequacy, and the later teaching phase by concerns with students and their educational growth and their personal teaching performance. In her conceptualization Fuller equates "problems," "reactions," "needs," and "anxieties" with "concerns." Coates and Thoresen (1976) consider "concerns" synonymous with both "anxiety" and "sources of anxiety." Fuller (1969) defined concerns in terms of the perceived problems or worries of teachers (pp. 214, 216). However, according to Keavney and Sinclair (1978) much teacher anxiety "may be the experience of inability to specify the source, a 'floating anxiety'" (p. 274). Thompson's study (1963) suggested that this more amorphous, vague, unspecifiable feeling of anxiety needs to be considered, for he found that the source of much of student teachers' anxiety was rumor or imagination.

2In a footnote to their discussion of Fuller's conceptualization of the concerns of teachers, Keavney and Sinclair (1978, p. 275) state that "...[her] conceptualization of the preteaching phase does not seem consistent with the empirical data. Whereas Fuller (1969) argues that this phase is characterized by nonconcern, Thompson (1969) in his study examined concerns prior to and during student teaching. 'In fact, anxiety during anticipation of internship was checked more than twice as often as during the period of internship itself' (p. 439.)"
Keavney and Sinclair (1978) question whether teacher anxiety and concerns are synonymous, although they state their belief that there may be some intimate connection between them. They also state that concerns for the self or preoccupation has been shown to characterize the highly anxious individual, but concerns may not always evoke anxiety. Further, they argue that research supports the proposition that anxiety about teaching decreases with length of teaching experience; however, Fuller's conceptualization does not show that concerns decrease, only that they change their nature.

It is not this investigator's intent to resolve the issues raised above but only to emphasize, as do Keavney and Sinclair (1978, p. 275), the need for additional research into a coherent theoretical framework from which to study teacher anxiety.

In a review of the literature on teacher anxiety Coates and Thoresen (1976) examined 15 studies on beginning teachers' reported sources of anxiety. They concluded that their concerns "...center[ed] around (a) their ability to maintain discipline in the classroom, (b) students liking of them, (c) their knowledge of subject matter, (d) what to do in case they make mistakes or run out of material, and (e) how to relate personally to other faculty members, the school system, and parents" (p. 164). From their examination of seven studies on experienced teachers' reported sources of anxiety they concluded that "...(a) time demands, (b) difficulties with pupils, (c) large class enrollments, (d) financial constraints and (e) lack of educational resources" (p. 165) were the chief sources of anxiety.
Bonney (1960) found that lack of prestige in the profession, tension and fatigue, association with immature minds, and inadequate income were possible contributors to the stress experienced by teachers.

Other concerns frequently reported in the literature (e.g., Douglas, 1976; Podrovsky, 1978; Stinnett, 1970) include:

1. Spending too much school time filling out forms and reports unrelated to the educational needs of their students.

2. Frequent school-to-school transfers in teaching assignments, with assignments far from home.

3. Lack of supplies and materials.

4. Lack of administrative support; and pressure not to "make waves" over deplorable conditions.

5. Vandalism, violence, and generally disorderly student behavior.

6. Seeing the casualties of the school system, e.g., promising students dropping out because of fear of crime and violence in school buildings, chronic absenteeism as a way of life, children grossly deficient in achievement for whom school has no solution.

Cruickshank (1982) reports on five areas of teachers' concern gleaned from eight related studies conducted by him and several colleagues over the past fifteen years focusing on the everyday professional problems of U.S. classroom teachers. Defining problems as
"...instances of 'goal/response interference'..." (p. 460), he concludes that teachers share the same unfulfilled goals. The five areas of concern are:

1. Affiliation—the need on the part of teachers to establish and maintain positive interpersonal relationships with colleagues and pupils.

2. Control—the need to have pupils behave appropriately.

3. Parent relationships—the need to have mutually supportive relationships with parents.

4. Student success—the need to employ the knowledge, skills, and attitudes that will enable them to help students succeed academically and socially.

5. Time—the need to manage time effectively in order to accomplish all the professional and personal tasks they have set for themselves.

Environmental Factors, Declining Enrollment, and the Nature of the Public School System as Sources

Environmental factors—e.g., noise, crowding, heating, lighting, color scheme, and cleanliness and condition of physical facilities associated with school settings—may contribute to teacher anxiety. Although environmental stress research has not specifically focused on schools, the case can be made that the school environment has many conditions that operate as stressors (Phillips & Lee, 1980). While teachers may adapt to these stressors in the short run, research implies that teachers exposed to such stressors over time are increasingly likely to develop "after effects" leading to lower tolerance for frustration and other "psychological" responses, as well as greater susceptibility to physical problems (Harlan & Jervick, 1976).
Declining enrollment in public schools and its effect on job security has contributed to stress in teaching. A report of the National Institute of Education (Golladay & Noel, 1978) indicated that of the newly qualified teachers in 1975-76, 23 percent had not applied for a teaching position; and approximately 54 percent obtained a position. There was a national surplus of about 92,000 teachers. "Each year, teachers are losing their jobs; and those who remain in teaching are beginning to experience the insecurity that they may be put on unrequested leave. This fact takes on added importance when it is realized that many teachers feel 'locked in'--that is, a diminished opportunity for mobility or the desire to change jobs" (Needle, Griffin, Svendsen, & Berney, 1980, p. 97). In a study of a random sample of Minnesota teachers, Needle, Griffin, and Svendsen (1979) found that 80 percent did not believe it was easy to find a job in another school system; 49 percent believed they had skills from their training and experience they would like to use but could not in their present position; and 25 percent believed that it was likely they would lose their jobs in the next few years.

The very nature of the public school system itself is a source of stress in teaching. Teachers generally have not been included in the decision-making process when it comes to establishing policies, procedures, and programs that have an impact on their teaching. Class size, workload, the range of individual differences in classes, the absence and/or inadequacy of supportive services, the inadequacy of school facilities and teaching supplies and materials, extra-duty
assignments, and the inappropriateness of teaching assignments also contribute to problems associated with teacher stress. Employment practices, teacher evaluation, dismissal procedures, leave policies, handling of student discipline, and administrative procedures are also sources of teacher stress (Boesel, 1977; Golladay & Noel, 1978; Kyriacou & Sutcliffe, 1978; Lorton, Coffland, & Brazelton, 1979; Minnesota Education Association, 1977; Phillips & Lee, 1980; Stinnet, 1970; Note 1).

Many teachers experience a sense of loneliness and isolation as they go about their teaching tasks. (Knoblock & Goldstein, 1971; Robert, 1974; and Sarason, 1971). They are isolated from other adults; schools are 'guarded' sites--adults in the community do not casually move in and out of them (Lortie, 1975; Waller, 1961). This isolation creates a situation that contains considerable potential for stress in view of the difficulties teachers have in conducting their classes and handling the many problems that arise (Phillips & Lee, 1980).

New York State United Teachers Stress Survey

In May, 1979, New York State United Teachers (NYSUT) sent a questionnaire to a sample of its membership in an attempt to identify the causes of stress among teachers. Teachers were asked to indicate on a scale of one to five, with one indicating lowest stress and five indicating highest stress, the relative degree of stress caused by each of 47 events. The events ranged from such items as assault and theft in the schools to lack of supplies and inservice training. The items
with an average rating of 3.0 or above were analyzed by NYSUT. The ten highest stress-producing events in descending order included:

1. Managing "disruptive" children
2. Incompetent administrators
3. Maintaining self-control when angry
4. Overcrowded classrooms
5. First week of school
6. Disagreeing with supervisor
7. Dealing with community racial issues
8. Preparing for a strike
9. Target of verbal abuse by students
10. Theft and destruction of teacher property

Further analysis found urban elementary and urban high school teachers reporting higher stress than any other group of respondents in the study. Urban teachers also reported over three times more items as stressful than did rural teachers, and almost twice as many items as suburban teachers. Teachers in the 31- to 40-year-old age bracket appeared to be under greatest stress, with the 41- to 50-year-old teachers reporting only half as many items as stressful, and teachers over 50 reporting even fewer items (NYSUT Teacher Stress Survey, 1979).

Chicago Teachers Union Stress Survey

Illustrative of the sources of teacher anxiety as mentioned above is the following discussion focusing on the results of the 1977 Chicago Teachers Union Survey (Koff, 1978). Four general themes or clusters of
Items (events) can be identified when events that are perceived as most stressful are compared with those that are viewed as least stressful.

The first theme—"priority concerns"—involves managing "disruptive" children, being threatened with personal injury, colleague being assaulted in school, and being the target of verbal abuse by students. These events were ranked 2, 4, 7, and 11 respectively. (See Table 1, pp. 31-33.) Violence and student discipline, two themes within this cluster, have received considerable attention by governmental agencies (Subcommittee of the Committee on the Judiciary of the U.S. Senate to Investigate Juvenile Delinquency, 1975), the public (annual Gallup polls of the public's attitude toward the public schools), and researchers (Boesel, 1977). Chicago teachers are saying that student discipline and safety are stressful events.

The second theme—"management tensions"—includes being involuntarily transferred, overcrowded classrooms, notice of unsatisfactory performance, lack of books and supplies, implementation of Board of Education goals, denial of promotion or advancement, and disagreement with supervisor. These events over which the teacher has little control represent "imposed" stress in the form of action constraints. Teachers must either live with or adapt to these constraints in the workplace.
Table 1

Rank Order of Events by Mean Stress Values and Attendant Data

<table>
<thead>
<tr>
<th>Event Rank Number*</th>
<th>Event</th>
<th>Mean (+10)**</th>
<th>Standard Dev.</th>
<th># Missing Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Involutarily transferred.</td>
<td>73.05</td>
<td>34.50</td>
<td>269</td>
</tr>
<tr>
<td>2</td>
<td>Managing &quot;disruptive&quot; children.</td>
<td>66.13</td>
<td>28.22</td>
<td>76</td>
</tr>
<tr>
<td>3</td>
<td>Notification of unsatisfactory performance.</td>
<td>62.67</td>
<td>37.60</td>
<td>374</td>
</tr>
<tr>
<td>4</td>
<td>Threatened with personal injury.</td>
<td>60.76</td>
<td>36.09</td>
<td>232</td>
</tr>
<tr>
<td>5</td>
<td>Overcrowded classroom.</td>
<td>57.52</td>
<td>30.09</td>
<td>198</td>
</tr>
<tr>
<td>6</td>
<td>Lack of availability of books and supplies.</td>
<td>55.93</td>
<td>30.21</td>
<td>115</td>
</tr>
<tr>
<td>7</td>
<td>Colleague assaulted in school.</td>
<td>54.72</td>
<td>33.78</td>
<td>262</td>
</tr>
<tr>
<td>8</td>
<td>Reorganization of classes or program.</td>
<td>54.03</td>
<td>24.26</td>
<td>111</td>
</tr>
<tr>
<td>9</td>
<td>Implementing board of education curriculum goals.</td>
<td>52.76</td>
<td>31.39</td>
<td>135</td>
</tr>
<tr>
<td>10</td>
<td>Denial of promotion or advancement.</td>
<td>52.45</td>
<td>35.12</td>
<td>349</td>
</tr>
<tr>
<td>11</td>
<td>Target of verbal abuse by student.</td>
<td>51.97</td>
<td>32.17</td>
<td>160</td>
</tr>
<tr>
<td>12</td>
<td>Disagreement with supervisor.</td>
<td>50.73</td>
<td>32.09</td>
<td>231</td>
</tr>
<tr>
<td>13</td>
<td>The first week of the school year.</td>
<td>50.00</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>14</td>
<td>Maintaining self control when angry.</td>
<td>48.39</td>
<td>29.78</td>
<td>113</td>
</tr>
<tr>
<td>15</td>
<td>Teaching students who are below average in achievement level.</td>
<td>48.20</td>
<td>30.34</td>
<td>115</td>
</tr>
<tr>
<td>16</td>
<td>Maintaining student personnel and achievement records.</td>
<td>47.34</td>
<td>30.93</td>
<td>147</td>
</tr>
</tbody>
</table>

**FOOTNOTES**

* "Event Number" refers to the order that the event appears in the survey.
** "Mean" in this case is the average of numerical stress values given all respondents to that event.
TABLE 1 (Continued)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Number</th>
<th>Event</th>
<th>Mean (+10)</th>
<th>Standard Dev.</th>
<th># Missing Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>8</td>
<td>Preparing for a strike.</td>
<td>46.68</td>
<td>30.16</td>
<td>153</td>
</tr>
<tr>
<td>18</td>
<td>15</td>
<td>Supervising student behavior outside the classroom.</td>
<td>46.00</td>
<td>29.17</td>
<td>132</td>
</tr>
<tr>
<td>19</td>
<td>9</td>
<td>Change in duties/work responsibilities.</td>
<td>44.79</td>
<td>27.25</td>
<td>151</td>
</tr>
<tr>
<td>20</td>
<td>17</td>
<td>Dealing with community racial issues.</td>
<td>42.84</td>
<td>31.99</td>
<td>290</td>
</tr>
<tr>
<td>21</td>
<td>31</td>
<td>Seeking principal's intervention in a discipline matter.</td>
<td>42.48</td>
<td>30.84</td>
<td>207</td>
</tr>
<tr>
<td>22</td>
<td>36</td>
<td>Disagreement with another teacher.</td>
<td>41.58</td>
<td>29.65</td>
<td>200</td>
</tr>
<tr>
<td>23</td>
<td>24</td>
<td>Dealing with staff racial issues.</td>
<td>40.25</td>
<td>30.54</td>
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<tr>
<td>24</td>
<td>28</td>
<td>Teaching physically or mentally handicapped children.</td>
<td>39.51</td>
<td>32.31</td>
<td>434</td>
</tr>
<tr>
<td>25</td>
<td>35</td>
<td>Dealing with student racial issues.</td>
<td>39.36</td>
<td>30.53</td>
<td>322</td>
</tr>
<tr>
<td>26</td>
<td>26</td>
<td>Lavoratory facilities for teachers are not clean or comfortable.</td>
<td>38.89</td>
<td>29.92</td>
<td>176</td>
</tr>
<tr>
<td>27</td>
<td>14</td>
<td>Developing and completing daily lesson plans.</td>
<td>38.87</td>
<td>28.58</td>
<td>127</td>
</tr>
<tr>
<td>28</td>
<td>10</td>
<td>Conference with principal/supervisor.</td>
<td>36.69</td>
<td>28.02</td>
<td>173</td>
</tr>
<tr>
<td>29</td>
<td>22</td>
<td>Evaluating student performance or giving grades.</td>
<td>35.11</td>
<td>25.62</td>
<td>155</td>
</tr>
<tr>
<td>30</td>
<td>33</td>
<td>Having a research or training program from &quot;outside&quot; in the school.</td>
<td>33.90</td>
<td>28.54</td>
<td>350</td>
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<tr>
<td>31</td>
<td>5</td>
<td>Attendance at in-service meeting.</td>
<td>32.74</td>
<td>27.16</td>
<td>114</td>
</tr>
<tr>
<td>32</td>
<td>27</td>
<td>Taking additional course work for promotion.</td>
<td>32.40</td>
<td>28.96</td>
<td>280</td>
</tr>
<tr>
<td>33</td>
<td>19</td>
<td>Talking to parents about their child's problems.</td>
<td>31.84</td>
<td>24.40</td>
<td>129</td>
</tr>
</tbody>
</table>
TABLE 1 (Continued)

<table>
<thead>
<tr>
<th>Event Rank Number</th>
<th>Event</th>
<th>Mean (+10)</th>
<th>Standard Dev.</th>
<th># Missing Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>34 20</td>
<td>Dealing with students whose primary language is not English.</td>
<td>31.30</td>
<td>27.40</td>
<td>474</td>
</tr>
<tr>
<td>35 30</td>
<td>Teacher-parent conferences.</td>
<td>30.24</td>
<td>24.24</td>
<td>169</td>
</tr>
<tr>
<td>36 4</td>
<td>Voluntarily transferred.</td>
<td>28.58</td>
<td>26.82</td>
<td>359</td>
</tr>
</tbody>
</table>

Note. From "CTU Survey Pinpoints Stress Sources in Teaching" in Chicago Union Teacher, March, 1978, p. 3.

The National Institute for Occupational Safety and Health (NIOSH) study of stress in 130 occupations found management tension to be a source of stress (Kotulak, 1977). This study found the major stress pattern to be in occupational situations where individuals work in jobs that give them responsibility for high performance/accountability where they do not have authority to do what they think is appropriate to providing clients with "quality" service. In a similar vein, Lortie (1975) reported that the lack of control teachers have in organizing activities for students undermines their relationship with them. When teachers act in ways that are detrimental to their relationships with students, they experience shame and guilt.

The third theme—"doing a good job"—includes maintaining self-control when angry and teaching students who are below average in achievement level. Maintaining self-control and being an effective teacher who is accountable for the academic performance and behavior of students, especially ones who are below average in achievement, are
important professional responsibilities that are perceived as stressful.

Finally, the fourth theme—"pedagogical functions"—includes teacher-parent conferences, dealing with bilingual students, discussion of children's problems with their parents, taking additional coursework for promotion, attending inservice meetings, evaluating students, conferences with the principal, and doing lesson plans. These lowest ranked events induce relatively little stress. One view of this theme might be that "...teachers are satisfied with the strictly pedagogical aspects of their job, but the stress induced by central administrative mandates (and inefficiencies) and by state and federal regulations in recent years interferes with their optimal performance in the most critical aspects of their roles. If this is the case, then there are significant diseconomies of scale that are not generally considered but which, apparently, are endemic to the educational process" (Koff, 1978, p. 2).

A second view of this theme would indicate that these issues are almost all areas in which the individual teacher exercises personal decision-making authority. Such an interpretation is further strengthened when the item, being voluntarily transferred, is added to the other items in this theme. It is reasonable to view this theme as relatively low in level of stress when the pattern of results reported in the NIOSH and Lortie studies above are considered.
Sources of Stress Among British Teachers


Gabriel (1957) reported the results of two survey studies based on data collected between 1948 and 1950 from primary and secondary school teachers in the United Kingdom. The first study was based on replies from 162 teachers who responded to two open-ended questions regarding "types of children's behavior which tend to frustrate you, and which you therefore find annoying" and "occasions which give rise to feelings of elation or depression." "Disobedience or obeying slowly" was the most frequently mentioned source of frustration and annoyance. The most frequently reported source of depression was "poor results, including exam results, lack of progress." The second study, based on 736 teachers, asked respondents to rate each of twenty items (derived from the first study) on a five-point scale labeled from "causes no feelings of worry or strain" to "causes the utmost feelings of worry or strain." "Large classes" was the item with the highest mean value followed by "slow progress," "noise of children," "clerical work," and "lack of equipment."

A study conducted in the Nottinghamshire and Derbyshire areas of England compared 100 teachers with 100 semiprofessionals matched for sex, age, and marital status. In response to the open-ended question "Where are the main sources of stress in your life?", 79 percent of the
teachers, as opposed to 39 percent of the semiprofessionals, mentioned work (Note 2).

A number of studies indicate that disruptive behavior is an important area of potential stress for many teachers (Caspari, 1976; Dunham, 1977; Hargreaves, 1976; Laslett, 1977; Lowestein, 1975: Maxwell, 1974). Comber and Whitfield (1979) reported the results of a survey of 642 teachers in primary, middle, and secondary schools. The teachers were asked to "Please describe briefly (but including any important detail) a recent school incident which caused you considerable stress and personal difficulty." Nearly half of those responding indicated that their school work never caused them considerable stress. Although Comber and Whitfield noted that by asking for incidents causing "considerable" stress, it is possible a number of minor, day-to-day incidents were not mentioned; this could distort the overall picture of school discipline problems. However, of the 342 teachers who did describe a recent school incident causing considerable stress and personal difficulty, 202 incidents concerned discipline--133, minor to moderate; 69, major, e.g., assault, damage to property, theft, truancy, and drug taking. Of the remaining incidents, 92 concerned conditions in the school; 15, interpupil problems; 13, curriculum, standard of work, examinations; 11, emotional outbursts; and 9, safety, hygiene, accident.

Dunham (1976) has identified three common stress situations: (a) reorganization, (b) role conflict and role ambiguity, and (c) poor working conditions. Regarding sources of stress associated with
reorganization, he identified leaving the security of familiar environments in grammar or secondary schools, working in large schools, and teaching pupils who have a much wider range of abilities and attitudes. In his discussion of role conflict and role ambiguity, he linked many sources of stress to poor communications between teachers within the school or between teachers and other adults outside the school. Regarding poor working conditions, he focused on inadequate buildings and high noise levels as important sources of stress.

Additional studies of role conflict and role ambiguity as important sources of teacher stress have been conducted (Dodds, 1974; Grace, 1972; Hoyle, 1969). Blackie (1977) has argued that the need for teachers to assume several roles is a major factor in teacher stress.

Pratt (1976, 1978) in a study of 124 primary school teachers drawn from a northern education authority asked the participants to complete a Teacher-Event Stress Inventory (TESI) consisting of 43 items describing potentially stressful occurrences. Teachers were asked to rate each event that had occurred during the day on a seven-point scale ranging from "this event occurred, but did not cause me to feel any stress" to "extremely stressful." The rating was completed on five, usually consecutive, days. A cluster analysis of the 43 TESI items indicated six clusters, which were labeled (a) staff relations, (b) non-cooperative children, (c) inadequate teaching, (d) aggressive children, (e) extra jobs, and (f) concern for children's learning. Perceived stress, as measured by mean daily TESI scores, and the six-item clusters were compared for biographical subgroups of the teachers
for the variables of sex, age, length of service, and post of special responsibility. However, none of the comparisons revealed significant differences. An examination of perceived stress in relation to the age of the children taught and the financial hardship of the home background of the children in each school, as indicated by the percentage of pupils receiving free school meals, revealed a significant interaction between the variables of financial hardship and age of children. In schools where a comparatively small proportion of pupils were receiving free meals, perceived stress appeared unrelated to the age of pupils taught. However, in schools where a comparatively large proportion of pupils received free meals, perceived stress increased with the age of pupils taught. This interaction also proved significant for the two item-clusters "non-cooperative children" and "aggressive children," where again each of the clusters increased with the age of children taught for only those teachers where a comparatively greater proportion of pupils were receiving free meals.

In a Kyriacou and Sutcliffe study (1978) of 257 teachers in medium-sized mixed comprehensive schools, teachers rated 51 sources of stress in response to the question, "As a teacher, how great a source of stress are these factors to you?" The items with the highest mean values, in descending order of means, were "pupils' poor attitudes to work," "trying to uphold/maintain values and standards," "poorly motivated pupils," "covering lessons for absent teachers," "too much work to do," "lack of time to spend with individual pupils," and "individual pupils who continually misbehave." A principal components
analysis of the sources of stress revealed four factors that together accounted for 52 percent of the total variance. The four factors (with items in parentheses loading highly) were labeled "pupil misbehaviour" (noisy pupils, difficult classes, difficult behaviour problems), "poor working conditions" (poor career structure, poor promotion opportunities, inadequate salary, shortage of equipment), "time pressures" (not enough time to do the work, too much work to do, administrative work), and "poor school ethos" (inadequate disciplinary policy of school, lack of consensus on minimum standards, attitudes and behaviour of the headmaster).

In addition to the more general overview studies of teacher stress in the United Kingdom as discussed above, a number of authors have focused their attention on particular sources of teacher stress. Hanson (1971) has concluded that teachers spend too much time actually teaching and that more preparation periods would help reduce the overall stress experienced. Hargreaves (1972) has examined staffroom relationships and has identified a number of possible sources of conflict there. Hinton (1974) has focused on the problems of teaching in large schools while Kelly (1974) has considered problems associated with mixed ability classes.

Methods Used to Reduce Teacher Anxiety

Teaching Skills Training and Relaxation Skills to Reduce Teacher Anxiety

Studies investigating the efficacy of various interventions in reducing teacher anxiety show contradictory and ambiguous findings
according to Coates and Thoresen (1978). They reviewed studies of interventions falling into two categories: those employing teaching skills training and those using some method for teaching relaxation skills. Two studies employing teaching skills training reported no treatment effects (Eder, 1971; Hughes, 1970). Gustofson (1969) found that exposing teachers to motion picture vignettes of anxiety-producing situations resulted only in an increase of student talk. Savidge (1969) reported reductions in high-anxiety teachers' attitudes toward teaching as a result of participation in a teaching methods course. Treese (1972) found microteaching effective in reducing anxiety for female, pre-service, and secondary teachers.

Attempts to use systematic desensitization to reduce teacher anxiety have met with conflicting results. Susskind, Franks, and Lonoff (Note 3) and Giblin (1972) found no differences between desensitization and control groups.

In a study by Dollar (1972) 72 female student teachers were randomly assigned to one of six treatment conditions: desensitization and behavioral skills training, desensitization only, relaxation and behavioral skills training, relaxation only, behavioral skills training only, and no-contact control. Treatment lasted three weeks. Each subject was pretested and posttested using the T.Q. 4 Scale and rated herself five times each day on the Spielberger State-Trait Anxiety Inventory. According to both the daily and posttreatment self-report data, the first treatment condition—desensitization and behavioral
skills training—was clearly superior to any of the other treatments in reducing self-reported anxiety.

Thoresen, Alper, Hannum, Barrick, and Jacks (Note 4) using group systematic desensitization with six elementary teachers in a low socio-economic area, found inconsistent changes in observed classroom teacher behavior and inappropriate pupil behavior. However, data from this study did indicate that some teachers can benefit markedly from desensitization and that this experience affects observable teacher and student classroom behavior.

Hendricks, Thoresen, and Coates (1975) evaluated the efficacy of a nine-hour self-administered program designed to train teachers in using cue-controlled relaxation while teaching. Two teachers were employed in an intensive time-lagged control design. After training, stress was reduced for both teachers. One- and three-month follow-up observations in the teachers' classrooms revealed that the reductions were maintained.

**Dogmatism as a Defense Against Teacher Anxiety**

In their discussion of coping styles that teachers may implement to reduce anxiety, Keavney and Sinclair (1978) focus on dogmatism. They state that "since 'the major function served by closed systems is to defend the self...against anxiety' (Rokeach, 1960, p. 367), it could be considered that dogmatism may be one way for the teacher to cope with his or her manifest anxiety in the classroom" (pp. 286-287). They go on to say that the implementation of such a strategy raises the question of whether the dogmatism is any more conducive to the learning
process than the anxiety it replaces. Quoting from Rokeach (1960) they say:

It is assumed that all belief-disbelief systems serve two powerful and conflicting sets of motives at the same time; the need for a cognitive framework to know and to understand and the need to ward off threatening aspects of reality...as the need to ward off threat becomes stronger, the cognitive need to know should become weaker, resulting in more closed belief systems (pp. 67-68).

Thus, in attempting to eliminate anxiety, the teacher may sacrifice "need to know" (including need to know his/her pupils).

Keavney and Sinclair (1978) continue by saying:

The adoption of such a coping style would probably result in a certain type of pupil-teacher interaction, a rather authoritarian one, for the dogmatic individual overidentifies with absolute authority, "justifying egocentric self-righteousness" (Rokeach, 1960, p. 69) and has a tendency toward self-proselytization. Yet at the same time this person experiences self-deprecatory thoughts and defends against such beliefs in self-inadequacy by excessive self-aggrandizement. Perhaps such teachers would be likely to dominate the classroom speaking time, only allowing students to regurgitate what they have said or to express agreement. This could have rather pervasive effects in the classroom....Adoption of the defence or coping-style of dogmatism may even retard the learning process more than did TchA (p. 287).

After analyzing several hours of audiotape obtained from the classroom of two primary teachers, Carnegie (1972) found that authoritarian and definitive explanations (e.g., "the answer is nine because I say so" and "two times three is six because it is") predominated. Causal-consequential explanations accounted for only two percent. These two aspects would not be conducive to the development of good student-teacher relationships.

Nicholls (1975) monitored changes in teacher anxiety (as measured by the A-State scale of the State-Trait Anxiety Inventory) and in
Control of Pupil Ideology over a series of testings in the course of a six-week practice teaching period for a group of teacher trainees. She observed a significant reduction in anxiety together with increasing custodial attitudes to pupil control. Additionally, her interaction analyses of audiotapes taken of lessons in the second, fourth, and sixth weeks of the practice gave further independent evidence of the increase in authoritarian attitudes.

"If further research substantiated the possibility that dogmatism is a maladaptive defence against anxiety (maladaptive to the learning process in which the teacher is involved), then studies would need to focus on ways of developing coping-styles fruitful to the learning process and not counterproductive to it" (Keavney & Sinclair, 1978, p. 288).

The Role of the Teacher in Reducing Teacher Anxiety

Much of the literature regarding stress interventions for teachers consists of lists of suggestions or tips on how to cope more effectively (Hunter, 1977; Kohl, 1980; Miller & Wiltse, 1979; Moe, 1979; Phillips & Lee, 1980; Stevenson & Milt, 1975). Behind these suggestions is the idea that there are no easy solutions for handling stress; only the individual teacher can ultimately diagnose and resolve stress (Phillips & Lee, 1980; Muse, 1980; Styles & Cavanagh, 1977). Typical of such lists is that found in Psychology Applied to Teaching (Biehler, 1978):

1. Develop self-awareness.
2. Recognize new possibilities in teaching.
3. Evaluate dissatisfaction.
4. Re-evaluate total load.
5. Look for help on specific questions.
6. Deliberately expose yourself to new experiences.
7. Seek satisfactions elsewhere.
8. Talk it over with friends.
9. Stimulate group discussions.
10. Get physical release of tension.
11. Avoid taking out your frustrations on the class.
12. Get professional help.³
13. In extreme cases, execute a strategic withdrawal.

The Role of the Educational Leader in Reducing Teacher Anxiety

The literature also contains many articles on the role of educational leaders, including building and central office administrators as well as teacher educators, in dealing with teacher stress (Cook, 1979; Garland, 1980; Mackeil, 1979; Miller & Wiltse, 1979; Needle, Griffin, Svendsen, & Berney, 1980; Ricken, 1980; Rogus & Martin, 1979; Schmidt, 1980; Youngs, 1979). Typical of such articles is that by Reed (1979), who gives ten axioms for principals to follow in helping teachers cope with stress:

1. Change. The mind is like a tire. If it is not rotated, it is going to wear out faster.


³ Miller and Wiltse (1979) state that mental health facilities or services should be available to all teachers. They refer to the Community Psychiatric Clinic in Bethesda, Maryland, which has free counseling services available and is staffed by two professionals to assist teachers with emotional problems.
3. Involve teachers in decision-making.
4. Communicate with each member of the staff.
5. Push for professional growth.
6. Promote physical and mental well-being.
7. Offer released time.
8. Release the pressure.
9. Actively involve parents.
10. Keep yourself tuned up.

In discussing the professional training of teachers, Chall (1975, p. 172) asks if we are perhaps:

...ready for a serious look at teacher preparation—particularly with regard to the relative emphasis given to the "art" of teaching as compared to the "science"? Have we perhaps gone too far in our attempt to lessen the "vocational" emphasis of the normal school by overlooking the need for practice in the skill and art of teaching? ... It would... be essential for clinical faculty members to continue practicing their arts—in schools, in clinics, in research and development centers, in the education industry. This is as essential as continued scholarship and research by faculty in the scientific and humanistic foundations of education. Without continued clinical practice, methods and clinical faculty run the risk of becoming outdated, unrealistic, and out of touch.

Clinical professors who are active and continually growing in their professional practice—and who are appropriately rewarded by the university—can serve as the much-needed professional models for prospective teachers. They can impart to prospective teachers the confidence, knowledge, and skill of the practitioner—certainly as essential to the educational enterprise as the scholar and researcher.

The Role of the School Counselor in Reducing Teacher Anxiety

In addition to building and central office administrators as well as teacher educators, school counselors have been identified as those who can take an active role in helping to reduce stress in teachers.
Leffingwell (1979, pp. 289-290) lists eleven suggestions that counselors have utilized and found to facilitate problem-solving behaviors that reduce stress and increase adaptive behavior in teachers:

1. Provide an environment of support and confidentiality in which the teacher can feel free to discuss feelings and ideas.
2. Clarify the point that feelings are real, and not necessarily bad. It is often helpful to point out that feelings occur because some antecedent behavior has existed. If the feeling is uncomfortable, it is a warning sign to the individual that some change in thoughts and behavior need to occur.
3. Disclose personal experiences with frustration and effective problem-solving techniques.
4. Believe that solutions do exist to problems, and that the ability to actively seek solutions on your own, or with the aid of significant others (e.g., counselors) is healthy.
5. Identify and accurately label the type of stress and the effects it is having on the individual.
6. Clarify the source and degree of stress. The more information you have at your disposal, the greater the probability of finding solutions.
7. Search for alternative solutions to problems, recognizing that there is no one solution that will work in all cases. Having a myriad of solutions reduces stress in case any one of the solutions is invalid.
8. Make a commitment to a plan of action knowing that if it is not successful there will be reasons for the lack of success, and forces (e.g., self, teachers, administrators, etc.) can be regrouped to search for alternate plans.
9. Provide an ongoing support base to assist in the identification and clarification of accurate labels and alternative solutions when original solutions are inadequate.
10. Train the teacher to cope with stress in positive ways, such as relaxation techniques.
11. Recognize that there are no panaceas to happiness. It is the active involvement of therapeutic personalities who facilitate the movement past the reduction of stress to a reasonable degree of satisfaction that provides the emotional support necessary for life.
The Role of Education Associations in Reducing Teacher Anxiety

The National Education Association in its concern regarding teacher stress has developed a handbook to serve as the basis for teacher stress workshops (Muse, 1980). Included is the NEA policy on teacher stress adopted by the 1980 NEA Representative Assembly:

The National Education Association believes that the dynamics of our society and increased public demands on education have produced adverse and stressful classroom and school conditions. These conditions have led to increased emotional and physical disabilities among teachers and other school personnel.

The Association urges its local affiliates, in cooperation with local school authorities, to develop stress management programs that will facilitate the recognition, prevention, and treatment of stress-related problems.

The Association further urges that the harmful effects of stress on teachers and other school personnel be recognized, and it demands procedures that will ensure confidentiality and treatment without personal jeopardy. (p. 17)

Also included are ten activities state and local education associations may engage in to help teachers discover better ways to cope:

1. Initiate and support school district programs that help teachers manage stress.
2. Sponsor association workshops on stress management.
3. Develop contract language that deals with school issues which create stress for teachers.
4. Negotiate insurance and/or sick leave programs that cover stress-related illnesses.
5. Promote and support appropriate sabbatical leaves for teachers.
6. Establish support groups within the association to help other members cope with individual stress.
7. In cooperation with the school system, set up group and/or individual counseling programs with professionals such as mental health personnel. The local mental health
association and many private consultant groups offer this service.

8. Develop strategies for gaining more control over many of the school-related situations that cause stress and which are currently under the control of someone else.

9. Identify instructional issues that cause distress for teachers and work for changes to make these less stressful.

10. Develop PR programs that demonstrate the stressful life of a teacher and seek support for association efforts to eliminate distress. (p. 41)

Cognitive Approaches to Reducing Anxiety

In describing a stress management training program that provides for the acquisition and rehearsal of cognitive and relaxation coping skills, Smith (1980) states that the:

...development of cognitive and learning-based anxiety reduction techniques during the past two decades has served to stimulate the development of training programs designed to help people acquire specific coping skills that can be used to prevent or reduce stress responses....Such programs typically provide for the acquisition and rehearsal of cognitive...skills that presumably have transsituational generalizability.

Given the widespread incidence of stress and its demonstrated negative effects on physical health and personal functioning, continued development and assessment of educational programs designed to enhance emotional self-control seems highly desirable. (p. 265)

The major contributions of Lazarus (1966), Schachter (1966), Arnold (1967), and Ellis (1962) have been to emphasize "the crucial role of cognitive mediators of emotionality. Appraisal processes create the psychological reality to which people respond, and the nature and intensity of emotional responses are a function of what
people tell themselves about the situation and about their ability to cope with it" (Smith, 1980, p. 266).

Ellis's major contribution has been to specify the manner in which maladaptive emotional reactions are a function of various irrational beliefs that are manifested in internal self-statements. Rational Emotive Therapy (RET) (Ellis, 1962) is directed at identifying and modifying the specific irrational self-statements that cause a person to appraise a situation in a stress-producing manner. (For a detailed discussion of the theory of RET see Ellis, 1962, chapter 2. A more concise description may be found in Morris and Kanitz, 1975, chapter 2. Ellis and Harper, 1975, a text written for the general public, is helpful in detailing through examples the way people incorporate irrational beliefs in maladaptive self-statements and behavior and is also a source of potentially adaptive self-statements.)

Meichenbaum (1971) has pointed out that there is actually a long history of treatment approaches stressing the importance of belief systems and self-verbalizations. Korzybski (1933) considers this too. Shaffer (1947) defined therapy as a "learning process through which a person acquires an ability to speak to himself in appropriate ways so as to control his own conduct" (p. 463).

Rimm and Masters (1974) in discussing RET write that it has:

...gained a remarkable number of enthusiastic adherents. While the popularity of RET may be partially attributed to the enthusiasm and productivity of its founder, in our view, there are more fundamental reasons for its widespread acceptance. First, for many practitioners (and many laymen), the basic assumption that what an individual says to himself has a major bearing on the way he feels and acts is incontrovertible. Second, the chief method of RET, direct (and non-
subtle) attempt on the part of the therapist to modify these self-verbalizations, is a plausible therapeutic corollary to the first assumption. Third, both in terms of theory and practice, Ellis's style of exposition is clear and explicit (p. 417).

Research regarding the efficacy of RET falls into two categories: case histories and experimental studies. Ellis (1957) summarized the results of 172 case histories that he had treated. Of these, 16 were treated with orthodox psychoanalysis, 78 received psychoanalytic psychotherapy, and 78 received RET. Definite improvement was reportedly shown by 50 percent of the first group, with a mean of 93 treatment sessions. Of the patients receiving psychoanalytic psychotherapy, 63 percent showed definite improvement in an average of 35 sessions. The group receiving RET showed an improvement rate of 90 percent with an average of 26 sessions.

Geis (1971) reports on the case of a 17-year-old culturally deprived high school student who had been referred because of suicidal ideation, depression, and a tendency to be highly perfectionistic, along with an intense fear of failure. This client's level of confidence increased and his depression diminished over the course of approximately nine sessions. A five-year follow-up revealed that he was doing well in school, had a reasonably active social life (he had not dated prior to treatment), and continued to be less perfectionistic.

Gullo (1971) reports on the case of a husband and wife, married for thirteen years, who had not engaged in successful intercourse. The major difficulty was the husband's impotence, which Gullo attributed to
his fear of failure and sexual puritanism. RET was employed as treatment along with suggestions for more effective sex play and a program for encouraging the clients to continue to work on solving their sex problems. During the sixth session, the couple reported having frequent successful intercourse. A two-year follow-up found that they had a child and continued to have successful intercourse. Additional case histories may be found in Ellis's *Growth through Reason* and Ellis and Harper's *A New Guide to Rational Living*.

In an experimental study by Rimm and Litvak (1969), subjects from a normal college population were required to read to themselves triads of sentences that should lead to maladaptive behavior (e.g., "My grades may not be good enough this semester...I might fail out of school...that would be awful.") Under the control condition additional subjects were required to read to themselves neutral triads of sentences (e.g., "Inventors are imaginative...Edison was an inventor; therefore, he was imaginative.") As hypothesized, experimental group subjects experienced significantly more emotional arousal (as measured by respiratory changes) than did control subjects.

A study by Maes and Heimann (1970) and one by Labouvie-Vief and Gonda (1976) have shown RET and Cognitive Training respectively to be positively affecting intellectual performance.

Two studies examining RET as a treatment for speech anxiety found this approach to be effective (Meichenbaum, Gilmore, & Fedoravicius, 1971; Trexler & Karst, 1972). The Trexler-Karst study also found evidence that the effect of RET had generalized to certain problem
areas unrelated to public speaking. In a study by Moleski and Tosi (1976), RET was "efficacious...in reducing stuttering behavior as well as accompanying anxiety and negative attitudes toward stuttering" (p. 311).

A cognitive-affective stress management training program has been reported on by Smith (1980). This program has been applied to a variety of clinical and nonclinical populations, including social welfare caseworkers, university administrators, bankers, business executives, test-anxious college students, heavy social drinkers, and athletes. The athletes have included preadolescents, college athletes, and professionals in a variety of individual and team sports. Two studies employing this program are discussed by Smith. One involved 142 child welfare caseworkers while the other involved a highly skilled and very talented adolescent figure skater who continually performed poorly in competitive events. Subsequent to the completion of this program, highly significant decreases in self-reported stress on the job and a dramatic performance reversal, respectively, were reported.

Smith and Smoll (1978) were able to demonstrate improved performance on the part of high-anxiety college players upon completion of this program. A study by Nye (1979) found the program to be effective in reducing the anxiety of high test-anxious college students.

The literature reviewed in this section provides rather convincing evidence that cognitive methods, including Ellis's RET, can be effective in modifying the maladaptive behavioral and emotional responses to situations appraised as stressful.
Social Support as a Mechanism to Reduce Stress

A new idea that has been conceptualized differently by different people but has not yet been explored extensively in empirical stress research nor applied widely in programs of stress prevention is that of social support. "Social support has been implicitly or explicitly central in earlier history, religious, sociological, psychological, and medical thought; it has just had different names: love, caring, friendship, a sense of community, and social integration. Thus, in some ways social support is really old wine in a new bottle. What is distinctive about this wine bottled under the social support label, however, is the claim that support may reduce stress, improve health, and, especially, buffer the impact of stress on health" (House, 1981, p. 14).

Social support has been defined in a variety of ways (Caplan, 1974; Caplan & Killilea, 1976; Kahn & Antonucci, 1980; Kaplan, Cassel, & Gore, 1977; Lin, Simeone, Ensel, & Kuo, 1979; Pinneau, 1975). Cassel (1976), in one of the major reviews of the impact of social support on stress and health, provides no explicit definition of social support. Cobb (1976, p. 300), however, in his major review on social support, defines it as "information belonging to one or more of the following three classes:

1 Information leading the subject to believe that he is cared for and loved;

2 Information leading the subject to believe that he is esteemed and valued;

3 Information leading the subject to believe that he belongs to a network of communications and obligation."
House (1981, p. 22) states that "at this point researchers can identify the major issues or questions that an adequate conception of social support must address, and can provide some tentative answers to these questions. These issues can be expressed in the question: Who gives what to whom regarding which problems?" He defines the full range of potential forms of social support in the form of a matrix (see Table 2 on page 55).
Table 2
Potential Forms of Social Support

<table>
<thead>
<tr>
<th>Source of Support</th>
<th>(1) Spouse or partner</th>
<th>(2) Other relative(s)</th>
<th>(3) Friend(s)</th>
<th>(4) Neighbor(s)</th>
<th>(5) Work supervisor</th>
<th>(6) Coworker(s)</th>
<th>(7) Service or care giver(s)</th>
<th>(8) &quot;Self-help&quot; group(s)</th>
<th>(9) Health/Welfare professional(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content of supportive acts</td>
<td>Emotional Support (esteem, affect, trust, concern, listening)</td>
<td>Appraisal Support (affirmation, feedback, social comparison)</td>
<td>Informational Support (advice, suggestion, directives, information)</td>
<td>Instrumental Support (aid in kind, money, labor, time, modifying environment)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Within this matrix of types of social support, each can be:

(a) general versus problem-focused
(b) objective versus subjective

As has been expressed elsewhere in the literature, teachers might consider increasing personal and professional support for one another in order to break through the loneliness, isolation, and frustration expressed by some teachers and thus be better able to address issues and problems confronting them every day (Lortie, 1975; Needle, Griffin, Svendsen, & Berney, 1980; Phillips & Lee, 1980; Robert, 1974; Waller, 1961).

Kirschenbaum and Glaser (1978, p. 2), in their manual for developing support groups, consider the problems of a public school teacher:

He takes a college course here, a workshop there, reads a book, and listens to a consultant invited in to a school in-service day....But his learning experience is very scattered. In all probability, there is no plan, no sequence, no guiding structure to the learning program. The teacher is left by himself to integrate and make sense out of a series of isolated experiences. There is no on-going dialogue, no place to pursue unanswered questions when the workshop ends, no help in comparing and contrasting and integrating the various ideas and approaches that have been experienced. Moreover, there probably is little or no help in implementing the new ideas and methods, in making the transition from the learning experience to the actual classroom setting....And if one does try and then runs into problems and obstacles, what then? Where is the support, the help in solving problems, the people with whom one feels safe enough to ask for help?

A remedy to this situation suggested by Kirschenbaum and Glaser is the professional support group:

A professional support group is a small group of professionals with a common area of interest who meet periodically to learn together and to support one another in their ongoing professional development.

The members of a support group offer and receive, broadly speaking, three kinds of help:

1. Stimulating ideas. The support group offers an occasion to expand one's thinking, be intellectually challenged, and gain new information and new insights related to one's professional involvement.
2. Practical Help. The support group offers an occasion to learn new methods, practice old and new skills, solve problems, and receive suggestions—all these providing concrete, practical help in one's day-to-day professional work.

3. Sense of Support. The support group provides a place where one can feel less alone, where discouragements can be shared and successes appreciated, and where confidence and energy are renewed.

These kinds of help constitute the immediate goal of the support group—the learning and support by and for its members.

Support groups also have a general, long-range goal: to improve education, the business professions, and the helping professions, wherever they are practiced. Part of this long-range goal is implicit in the more immediate goal. To the extent that the group can provide learning and support for its members, each member will be more effective as a professional. (p. 3)

Such a group would fall into House's conceptualization (see Table 2). All four content areas of supportive acts could be included in a professional support group for teachers.

The majority of the research examining social support has focused on social support as it relates to physical health and disease. Cassell (1976), in his paper presented to the 103rd Annual Meeting of the American Public Health Association, states that:

Taken alone...no one of these studies is entirely convincing. Taken together, however, the results are more impressive....it would seem more immediately feasible to attempt to improve and strengthen the social supports rather than reduce the exposure to the stressors. With advancing knowledge, it is perhaps not too far-reaching to imagine a preventive health service in which professionals are involved largely in the diagnostic aspects—identifying families and groups at high risk by virtue of their lack of fit with their social milieu and determining the particular nature and form of the social support that can and should be strengthened if such people are to be protected from disease outcomes. (p. 121)
In discussing his review of the evidence that supportive interactions among people are protective against the health consequences of life stress, Cobb (1976, p. 310) writes:

"We have seen strong and often quite hard evidence, repeated over a variety of transitions in the life cycle from birth to death, that social support is protective. The very great diversity of the studies in terms of criteria of support, nature of sample, and method of data collection is further convincing that we are dealing with a common phenomena....The conclusion that supportive interactions among people are important is hardly new. What is new is the assembling of hard evidence that adequate social support can protect people in crisis from a wide variety of pathological states...."

Reviews of studies that demonstrate a simple direct effect of social support on health may be found in Gore, 1973; Penneau, 1975; House, 1981; Note 5.

The findings from a study by Sloane, Staples, Cristol, Yorktown, and Whipple (1975) in a psychotherapeutic situation have some relevance to the efficacy of social support as it relates to stress management. Their follow-up study of maladjusted people who had received either psychotherapy or behavior therapy compared to an untreated control group found that members of the two therapy groups showed noticeable improvement. Regardless of whether they received psychodynamic or behavioral treatment, the subjects attributed their improvement to the therapist's caring attitude, desire to help, encouragement, willingness to listen, ability to convey a sense of hope, confidence in the client, and communication that the client was highly valued as a person.

Two studies examining the experimental manipulation of social supports suggest the potential of a laboratory approach to social supports (Sarason, 1980). In the first study subjects were college
students differing in test anxiety. Subjects with high, middle, and low scores on the Test Anxiety Scale (TAS) (Sarason, 1978) performed on a difficult anagrams task under neutral or experimental conditions. The experimental condition emphasized that ability to solve anagrams was related to intelligence and likelihood of success in doing college-level academic work. A second experimental variable was the opportunity for social supports. While half of the subjects performed only on the anagrams, the other half in the social support condition participated in a prior twenty-minute group discussion. Six subjects who attended these discussions were asked to discuss their academic experiences regarding stress and anxiety about exams, how often they shared worries about tests with other students, barriers to this sharing of personal concerns, and feelings about how close such discussions brought them to people who otherwise would just be "other" students. In addition, two confederates were present at the discussions. They were to stimulate discussion and keep it going if necessary, positively reinforce comments made by participants and build group feeling and a sense of sharing, and conclude the discussion by saying that it had been valuable for them commenting on the degree of compatibility among group members and suggest that members meet after completion of the experiment to see if an informal meeting could be arranged for continuing the discussion.

The results of this study found that the high TAS subjects performed more poorly under the condition emphasizing the evaluative aspect of subject's performance. Subjects participating in the group
discussion performed at a higher level than did subjects who did not. "The results of this experiment suggest that association with others and hope of its continuation may reduce the potency of [thoughts of personal inadequacy and helplessness] even when the threat of evaluation is present. As anxious self-preoccupation decreases, the opportunity for task-oriented thinking increases, with consequent improved performance" (Sarason, 1980, p. 86).

A second study by Sarason (1980) examined "acceptance" as a dimension of social support. TAS scores were also used as a measure of individual differences in self-preoccupation aroused by an evaluative call for action. The anagrams task and instructional conditions in the above study were used. In this experiment social support was provided vicariously for half the subjects. After the experimenter introduced the anagrams task, a confederate raised his hand and said, "I don't think I can work these problems. They get me all upset. I'm no good at them." The experimenter's response was, "You're not the only person who clutches up in this kind of situation. I can tell from the fact that you took the initiative to tell me how you feel that you're an intelligent person. Just do your best. That's all anybody can expect. I think you have more ability than you give yourself credit for."

The four experimental treatment groups were treated with (a) evaluative instructions, (b) social support, (c) evaluative instructions and social support, and (d) as a control group, respectively. The sixteen subjects under each condition were divided into high and low TAS groups. High TAS subjects performed more poorly than low TAS
subjects under the evaluative instructions. However, the performance of high TAS subjects under the two conditions in which support was present was equal to or better than the low TAS group in these two conditions.

Much of the activity surrounding social support research can be seen as part of a search for what Vickers, in discussing institutional and personal roles, calls "an appreciative system sufficiently widely shared to mediate communication, sufficiently apt to guide action and sufficiently acceptable to make personal experience bearable" (1971, p. 439). Caplan, in the introduction to the third publication of the Harvard Laboratory of Community Psychiatry dealing with support systems (Helping the Helpers to Help by Ruth Caplan and Support Systems and Community Mental Health by Gerald Caplan are the other two books in this series) writes:

The present volume...is not intended as a definitive or systematic statement, but as a report on work in progress that shares with others our theoretical and practical explorations of this new idea, and that we hope will stimulate many...to try out variations of it for themselves....Our Harvard group is not re-discovering the wheel. What we are advocating is an attempt to develop a coherent framework that will bring together into a meaningful whole a body of ideas, research findings, and practice principles that may be used to guide our program planning and techniques, and thus make us more effective in raising the level of mental well-being and competence in populations. (Caplan & Killelea, 1976, pp. 1-2)

Effects of Teacher Anxiety on Teacher and Student Behavior

Coates and Thoresen (1978) state that "although a substantial number of teachers report that they are working under strain or tension to the point of discomfort, it remains to be determined whether this
anxiety is detrimental or beneficial to classroom teachers and students" (p. 168).

Some studies have failed to find important relationships between teacher anxiety and teaching performance. Parsons (1971) found no relationship between teacher anxiety and teaching competence, while Kracht and Casey (1968) found a negligible (but significant) correlation between anxiety and teacher "warmth." A study by Clark (1972) found that more anxious student teachers tended to award lower grades than less anxious student teachers. Mattson (1974) reported that student ratings of teaching effectiveness were highest for low-anxiety teachers.

Regarding the relationship between teacher anxiety and student anxiety, Doyal and Forsyth (1973) found a positive correlation between teacher anxiety and third grade students' test anxiety. Stanton (1974) found significant negative correlations between these two variables. Sellinger (1972) examined the interaction of teacher anxiety, organizational climate, and pupil test anxiety and found that test anxiety was lowest for students of high-anxiety teachers in closed organizational climates, and next lowest for students of low-anxiety teachers in open organizational climates. Students of low-anxiety teachers in closed organizational climates and high-anxiety teachers in open organizational climates showed more test anxiety than students of high anxiety teachers in closed organizational climates.

Three studies have used direct behavioral observation to determine the effects of teacher anxiety in the classroom. Petrusich (1966)
found that high-anxiety student teachers compared with those with low-anxiety (a) tended to yell less often, (b) were more affectionate in their speech but gave their pupils less verbal support, (c) spent more time structuring activities, (d) spent less time in miscellaneous "chatter," and (e) engaged in more "hostile speech and behavior." Students of high-anxiety teachers also tended to be more disruptive than students of low-anxiety teachers.

Harootunian and Koon (1970) examined the relationship between teacher anxiety, perceived student competence, and task difficulty on teacher positive and negative reinforcements. Although results were generally nonsignificant, some trends were noted. High-anxiety teachers tended to administer fewer positive reinforcements to competent students than to incompetent in the easy task condition. Koon's (1971) examination of the effects of teacher anxiety and teacher expectations in teacher-pupil interaction indicated that high-anxiety teachers, unlike low-anxiety teachers, used significantly less task-oriented behavior with students they expected to be competent than with students they expected to be incompetent.

A study by Thoresen, Alper, Hannum, Barrick, and Jacks (Note 4) found that negative teacher and inappropriate student behavior were reduced when teachers were trained in systematic desensitization.

Moskowitz and Hayman (1974) reported more rowdy and disruptive classes for high anxious teachers. They also found that success as a teacher as assessed by pupils (who were rated "best" teachers) was
reflected in differential teacher behaviors, with "best" teachers being much more relaxed and at ease than the less successful teachers.

Zimmerman (1970) found that a praise-minus-criticism index that measured teacher behavior correlated significantly with pupil anxiety.

Considering the relationship between teacher anxiety and student achievement, Washbourne and Heil (1960) and Osborne (1973) suggested that achievement will be lower for pupils of high anxious teachers than for pupils of low anxious teachers. Washbourne and Heil compared "self-controlling," "turbulent," and "fearful" teachers and found that these different kinds of teachers obtained different amounts of achievement from their pupils. The "fearful" teacher had the lowest amount of pupil achievement; the "self-controlling" teacher, the most. Osborne's study suggested that teacher ineffectiveness is not equally pervasive in the classroom of the high anxious teacher but that he/she is differentially effective with high anxious and low anxious pupils. Whereas high anxious and low anxious pupils of low anxious teachers performed equally well on a spelling test, the high anxious students of the high anxious teachers performed less well than their low anxious counterparts.

Clark (1972) found high anxious teachers to be much more severe in awarding grades by typically giving lower grades than low anxious teachers. The fact that there is substantial empirical support that anxiety will debilitate memory (Sieber, 1969), reduce the range of cue utilization (Easterbrook, 1959), and interfere with direction of
attention (Wine, 1971) provides impetus for considering the relationship between teacher anxiety, student anxiety, and student achievement.

Teacher absenteeism and attrition, as mentioned in the introduction to this study, appear to be related to teacher anxiety. In addition to the research cited there, Crane (1974) reported that 10 to 12 percent of students enrolled in teacher training courses withdrew in the United Kingdom in 1967-1968. Crane also found that acceptance of self and other teachers was related to job satisfaction and adjustment to teaching (withdrawal from course).

In a study by Krasno (1972), of the original sample of 154 student teachers, only 84 remained in the teaching profession 18 to 21 months after completion of teacher training. Krasno also concluded that rigid educational opinions of teachers were related to teacher survival in the profession.

Cortis (1970) found that the teacher characteristics of friendliness, stability, and conscientiousness were related to teacher satisfaction.

Although the Crane, Krasno, and Cortis studies did not actually measure teacher anxiety:

Teacher characteristics found to be associated with teacher survival and related measures of expected and actual job satisfaction have frequently been found to be negatively associated with anxiety level. Thus, the characteristics of individuals who withdraw from teaching (namely, low acceptance of self and others, and low on a measure of friendliness) are reminiscent of the high anxious person...though no conclusions can be drawn at this stage regarding the consequences of TchA at this level of teaching effectiveness, the indicators are not optimistic...Considering the high level of wastage of trained teachers via attrition, there seems to be an important need for further investigation to
clarify the possible negative impact of TchA at this level of the educational process. (Keavney & Sinclair, 1978, p. 283)

Summary of Review of Literature

Research into the incidence and sources of teacher anxiety has been extensive over the past five decades. Such research suggests that teachers experience considerable tension, anxiety, or stress in the classroom from a variety of sources. Despite the proliferation of such research, the research into teacher anxiety has generally been exploratory. Little attempt has been made to explain why teachers are anxious about teaching, how they deal with such anxiety, and the impact of the anxiety response and its associated coping styles on the teacher's effectiveness in the classroom. These issues are complex and the variables are frequently difficult to isolate for study.

Behavioral scientists and medical researchers have examined and continue to explore the physiology and psychology of anxiety and stress. At the same time knowledge regarding effective means of coping with the anxiety and stress associated with living and working in a complex society is increasing. This growing body of knowledge has been only minimally applied to the field of education. Further focusing on the anxiety experience per se, that is, the incidence and sources or causes of teacher anxiety, has its limitations. Instead, in our attempt to understand more fully and to mediate the effects of teacher anxiety on the behavior of teachers and students, it seems important to focus more squarely on the study of coping strategies used in dealing with such anxiety (Keavney & Sinclair, 1978). If this can be achieved,
then it may be that teachers can turn the corner and realize a minimizing of stress related to the classroom, the school, and the students whom they teach.
CHAPTER III

METHODOLOGY

The purpose of this study was to examine the efficacy of instructing teachers in stress management techniques. Two approaches--Rational Emotive Therapy and Professional Support Group--were used in this study. Chapter III includes the methods and procedures used to compare the two approaches. Included are sections on the design, population and sample, data collection instruments, treatments, and data analysis procedures.

Design

The design for this study was a randomized control-group pretest-posttest design (Van Dalen, 1973), one of the most strongly recommended and widely used research designs. Such a design controls the potential sources of internal invalidity, i.e., the main effects of history, maturation, testing, instrumentation, regression, selection, mortality, and interaction of selection and maturation, etc.

However, this design does not control the interaction of testing and treatment, a source of external invalidity. Regarding the interaction of selection and treatment, there is the possibility that the effects validly demonstrated hold only for that unique population from which the experimental and control groups were jointly selected.
A further area of concern regarding external validity is that of reactive arrangements, the patent artificiality of the experimental setting and the subject's knowledge that s/he is participating in an experiment (Campbell & Stanley, 1963; Van Dalen, 1973).

According to Van Dalen (1973, pp. 279-280), the following steps should be taken when employing this design:

1. Select Ss from a population by random methods, if possible.
2. Assign Ss to groups and X to groups by random methods.
3. Test the Ss on the dependent variable\(^1\) (obtains the \(T_{1E}\) scores for the experimental Ss and the \(T_{1C}\) scores for the control Ss).
4. Keep all conditions the same for the groups except for exposing the experimental Ss--but not the control Ss--to the independent variable for a stipulated time.
5. Test the Ss on the dependent variable (obtains the \(T_{2E}\) scores for the experimental Ss and the \(T_{2C}\) scores for the control Ss).
6. Find the difference between the \(T_1\) and \(T_2\) scores for each S and the mean of these differences for each group, \(D_E\) and \(D_C\)\(^2\).
7. Compare \(D_C\) and \(D_E\)\(^3\) to determine whether the application of X has presumably caused a change in the experimental group's scores as compared with the control group's scores.
8. Apply an appropriate statistical procedure to ascertain whether the difference in the scores is sufficiently great to be a statistically significant difference or whether it is only a chance occurrence.

\(^{1}\) Sometimes Ss are pretested before they are assigned to groups.

\(^{2}\) If the analysis of covariance technique is employed, the final mean scores are adjusted for pretest differences prior to step 6.

\(^{3}\) A comparison of \(D_E - D_C\) actually reflects the effect of X plus any interaction effects of (1) \(T_1\) and \(X\), (2) \(X\) and \(U\) (uncontrolled events, such as history and maturation), and (3) \(T_1\), \(X\), and \(U\). Hence \(D_E - D_C = X\) only if one can assume the effect of these interactions is zero.
Steps 2 to 6 may be depicted as follows:

<table>
<thead>
<tr>
<th>Randomly assigned*</th>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>(R) Experimental Group</td>
<td>$T_{1E}$</td>
<td>$X$</td>
<td>$T_{2E}$</td>
</tr>
<tr>
<td>(R) Control Group</td>
<td>$T_{1C}$</td>
<td></td>
<td>$T_{2C}$</td>
</tr>
</tbody>
</table>

$D_E = \text{Mean of differences between experimental Ss's pretest and posttest scores}$

$D_C = \text{Mean of the differences between the control Ss's pretest and posttest scores}$

Compare $D_E$ and $D_C$ to ascertain effect of $X$

* Whenever Ss and X are randomly assigned to groups, the (R) placed before the group conveys this information.

This design may be extended to permit the study of two or more variations of the independent variable on a dependent variable. For example, to ascertain the effect of managing stress by two different techniques, one group may be exposed to $X_a$ technique, a second group to $X_b$ technique, and a third group to no $X$—no stress management technique.

| (R) First group | $T_{1E_1}$ | $X_a$ | $T_{2E_1}$ |
| (R) Second group | $T_{1E_2}$ | $X_b$ | $T_{2E_2}$ |
| (R) Control group | $T_{1C}$ | | $T_{2C}$ |

If the experimenter is merely interested in comparing the effects of two treatments, s/he may not use the no-$X$ control group, but it does give him/her an added measure of information for fuller interpretive purposes.
Population and Sample

The population for this study consisted of all teachers assigned to elementary (K-5) and middle school (6-8) programs having direct student contact in a major midwestern U.S. desegregated urban public school system. To obtain the sample for this study a computer-generated, alphabetical list of the population was obtained. The teachers were numbered consecutively from 1 to 1,843.

Using a table of random numbers (Edwards, 1967) 250 teachers were selected to receive a letter (Appendix A) explaining the purpose of this study and inviting them to attend a meeting to explain more fully their involvement if they should decide to participate. Table 3 displays the response to the letter of invitation to participate in this study.

Table 3

Sample Population and Response Rate to Letter of Invitation

<table>
<thead>
<tr>
<th>Results of Mailing</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Mailing</td>
<td>250</td>
<td>100.0</td>
</tr>
<tr>
<td>Returned Letters (Incorrect Address)</td>
<td>1</td>
<td>.4</td>
</tr>
<tr>
<td>No Response</td>
<td>159</td>
<td>63.6</td>
</tr>
<tr>
<td>Response by Letter</td>
<td>85</td>
<td>34.0</td>
</tr>
<tr>
<td>Response by Personal Contact</td>
<td>5</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Table 4 displays the types of responses given by the 90 who replied to the letter of invitation to participate. Since letter recipients were told to check those response items that applied to them and since some did in fact check more than one response, the total exceeds 90.

Table 4
Tabulation of Items Checked by 90 Respondents to Letter of Invitation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>1. I plan to attend the information meeting.</td>
</tr>
<tr>
<td>5</td>
<td>2. I would consider participating in this course but cannot attend the information meeting.</td>
</tr>
<tr>
<td>26</td>
<td>3. My schedule does not permit me to enroll for this course.</td>
</tr>
<tr>
<td>16</td>
<td>4. I am not interested in stress management at this time.</td>
</tr>
<tr>
<td>9</td>
<td>5. I am not interested in obtaining graduate credit.</td>
</tr>
<tr>
<td>7</td>
<td>6. Other (Please write a brief explanation.)</td>
</tr>
</tbody>
</table>

As mentioned above, respondents were free to check any and as many items as they deemed appropriate. Checking items one through three was viewed as expressing an interest in stress management since checking item four indicated no interest in stress management at this time. The total number of different individuals checking items one through three was 65, or 26 percent of the total sample of 250 teachers. This figure of 65 could have been even higher since some teachers checking item four may have been interested but not "at this time." According to the
President's Commission on Mental Health (1978) there is evidence that as many as 25 percent of the population is estimated to suffer from mild to moderate depression, anxiety, and other indicators of emotional disorder. Levi (1981) cites the President's Commission report in his discussion of the prevalence of stress in the U.S. population. The 26 percent of this study's sample expressing an interest in stress management is in line with the general population's 25 percent exhibiting stress-related symptoms and perhaps being interested in stress management.

Twenty-five teachers attended the meeting. An additional fourteen could not attend but were still interested and were given information regarding the study. The following points were covered in the information regarding the individual's involvement should s/he elect to participate in this study:

- Acknowledgement of the prevalence of teacher stress and a brief overview of areas of research into teacher stress.
- Purpose of the study—to examine the efficacy of instructing teachers in stress management techniques.
- Names of and two sample items from each of the instruments used to obtain data.
- Dates, times, and place for pretests, six sessions, and post-tests.
- Group assignments
- Requirements of participation for treatment groups—completion of pretest and posttest instruments, session attendance, comple-
tion of one instrument at the beginning of each session, group discussion/participation, minimal work outside of sessions.

- Requirements of participation for control group—completion of pretest and posttest instruments; completion and mailing of one instrument on Wednesday of each week during treatment sessions; optional attendance at and participation in sessions similar to treatment groups following posttests (mandatory if receiving graduate course credit).

- Instructions regarding graduate credit.

- Follow-up sessions for group and individual interpretation of instrument results.

- Follow-up sessions to continue the study.

- Confidentiality.

A total of 28 teachers elected to participate in this study. However, one subject had incomplete pretest data and was eliminated from the statistical analysis. The final sample, then, consisted of 27 teachers.

**Data Collection Instruments**

The three instruments used in this study were the Schedule of Recent Experience (SRE) (Amundson, Hart, & Holmes, 1981); the State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970); and the Taylor Manifest Anxiety Scale (TMAS) (Taylor, 1951, 1953). Copies of these instruments may be found in Appendixes B, C, and D, respectively.
Schedule of Recent Experience

The Schedule of Recent Experience, a paper-and-pencil questionnaire, elicits information regarding the occurrence of particular events—42 life events—in an individual's recent life experience. Designed for collecting quantitative and qualitative data about people's life-style and history, it serves as a standardized form for organizing such data in research. The 42 life events generally refer to ordinary, though sometimes extraordinary, social and interpersonal transactions and major areas of dynamic significance in the social structure: family constellation, marriage, occupation, economics, residence, peer relations, education, religion, recreation, and health. To complete the instrument, subjects are asked to record the number of times each event occurred in specified time periods. The form used in this study asked respondents to consider the period during the 12 months preceding the administration of the instrument.

The development of this instrument has evolved over a period of three decades beginning in 1949. Based on the "life chart" of Meyer (1919), this instrument has also been called the Social Readjustment Rating Questionnaire (SRRQ) and the Social Readjustment Rating Scale (SRRS).

The scoring process for the Schedule of Recent Experience comes from the Social Readjustment Rating Questionnaire. To compute the life change score for the specified time period, in Life Change Units (LCU), it is necessary to calculate it as a weighted item frequency:

\[ \text{LCU} = \sum (\text{Item frequency} \times \text{Scale value}) \]
Research using the Schedule of Recent Experience suggests that the more life change that occurs the greater the likelihood of illness. To evaluate the LCU score for the previous year, the following criteria have been established:

1. Over 300 LCU = 80 percent chance of illness in the near future.
2. 150-299 LCU = 50 percent chance of illness in the near future.
3. Less than 150 LCU = 30 percent chance of illness in the near future.

Both McLean (1979) and House (1974) have emphasized that the time and importance most adults invest in their work suggest that what happens on the job can have pervasive effects on their health and well-being. Further, there is a growing body of evidence indicating that psychosocial forms of occupational stress have deleterious effects on a wide range of physical and mental health outcomes (Caplan, Cobb, French, Harrison, & Penneau, 1975; House, 1974; House & Jackman, 1979; House, McMichael, Wells, Kaplan, & Landerman, 1979; Kasl, 1974, 1978; McLean, 1979). Changes in work in particular, and life in general, are considered to be frequently stressful in and of themselves; it has also been demonstrated that the occurrence of several important changes at once or in close proximity may contribute to increased individual vulnerability to illness (McLean, 1979). As a result of the development of the Schedule of Recent Experience, it is possible to investigate systematically whether people who have experienced more numerous and/or serious recent change might be more vulnerable to
illness. The assumption here is that when people's lives are in a relatively steady state of psychosocial adjustment with little stress and few life changes, less illness will be found and vice versa. With this relationship between both work and life stress, change and illness in mind, the Schedule of Recent Experience was used in this study to control for life events that may contribute to subjects' anxiety levels.

Reliability and Validity of the Schedule of Recent Experience

Developed in a tuberculosis sanatorium, the Schedule of Recent Experience was cross-validated on two samples totaling 165 admissions, pretested for readability and clarity, with the maximal validity being established as lying in the age range from 25 to 55 years. A reliability coefficient of 0.831 was obtained between first and second administrations of the form at five-month intervals in a group of newly admitted white patients (age 25-60) with pulmonary tuberculosis (Hawkins, Davies, & Holmes, 1957).

A number of studies have found reliability estimates of the Schedule of Recent Experience to vary from as high as .90 to as low as .26 (Casey, Masuda, & Holmes, 1967; McDonald, Pugh, Gunderson, & Rahe, 1972; Thurlow, 1971). In reviewing these studies, Rahe (1974) writes:

This dramatic falloff in reliability seems to be related primarily to (1) the time interval between administrations of the questionnaire, (2) the education level, and probable intelligence, of the subjects, (3) the time interval over which subjects' recent life changes are summed, (4) the wording and format of the various life event questions, and (5) the intercorrelations between various life change events.
When the time interval between questionnaire administration was two weeks, the test-retest correlation was .90; when the interval was eight months, the correlations ranged between .64 and .74; a ten-month interval gave correlations between .52 and .61; a two-year interval gave a correlation of .26. Highest correlations were obtained from graduate students in psychology (.90) and physicians (.64 to .74). Intermediate correlations were obtained from military enlisted men (.55 to .61). The extremely low correlation of .26 was obtained from brewery workers. When subjects reported life changes for yearly rather than six-month intervals, reliability increased. Questions with modifiers in them (e.g., "major" or "a lot more") and questions with intricate formats were less reliably answered than those without qualifiers and those more simply presented. Finally, since many of the life-change questions proved to be highly intercorrelated, test-retest reliability was seen to be enhanced by handling the questions by interrelated clusters rather than by LCU score. (p. 83)

A different type of reliability was studied by Rahe, Romo, Bennett, Siltanen, and Arthur (1973). In this study 140 patients completed the SRE for themselves and their spouses completed a separate questionnaire "as if" they were the patient. Acknowledging that spouses do not know all of their mate's recent life changes, interpair correlations still ran between .50 and .75 over the one to two years immediately prior to study. In a similar study, results indicate that when life events are carefully dated by interviewers and confined to those events that both spouses would know about, interpair correlations can be obtained as high as .78 (Brown, Sklair, Harris, & Birley, 1973). Rahe (1974, p. 83) states in his discussion of the validity of the Schedule of Recent Experience that it is a "moderately" valid measure.

State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory was developed as a research instrument for investigating anxiety phenomena in normal adults. It
consists of separate self-report scales for measuring two distinct anxiety concepts: state anxiety (A-State) and trait anxiety (A-Trait). The A-State scale is composed of 20 statements requiring respondents to indicate how they feel at a particular moment in time. The A-Trait scale, also composed of 20 statements, requires respondents to indicate how they generally feel.

To complete the State-Trait Anxiety Inventory subjects are asked to respond to each item by rating themselves on a four-point scale. The response categories for the A-State scale are: (1) Not at all; (2) Somewhat; (3) Moderately so; and (4) Very much so. For the A-Trait scale they are: (1) Almost never; (2) Sometimes; (3) Often; and (4) Almost always. The wording of some of the items is such that a rating of four indicates a high level of anxiety, while for others it indicates a low level of anxiety. Scoring weights are adjusted accordingly.

Normative data for the State-Trait Anxiety Inventory are available for large samples of college freshmen, undergraduate college students, and high school students, as well as male psychiatric patients, general medical and surgical patients, and young prisoners. "While the STAI norms are not based on representative or stratified samples, the information that is provided makes it possible to compare scores obtained by selected experimental groups and by individual clients or patients with important reference groups" (Spielberger et al, 1970, p. 5).

The norms for undergraduate students were used in this study. They are based on a sample of 484 undergraduate students (253 males,
231 females) at Florida State University. They were all enrolled in an introductory psychology course and were first tested during a regular class period. Many of them were subsequently retested to determine the reliability (stability) of the State-Trait Anxiety Inventory. The means, standard deviations, and alpha reliabilities of the State-Trait Anxiety Inventory A-State and A-Trait scales for the undergraduate students are found in Table 5. Normalized T-scores (mean = 50; SD = 10) and percentile ranks for males and females separately are provided. The percentile rank was used in this study.

Table 5

STAI Means, Standard Deviations and Alpha Reliabilities for Undergraduate Students

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Trait</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>37.68</td>
<td>38.25</td>
</tr>
<tr>
<td>N</td>
<td>253</td>
<td>231</td>
</tr>
<tr>
<td>SD</td>
<td>9.69</td>
<td>9.14</td>
</tr>
<tr>
<td>Alpha</td>
<td>.90</td>
<td>.89</td>
</tr>
<tr>
<td>A-State</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>36.35</td>
<td>35.12</td>
</tr>
<tr>
<td>N</td>
<td>253</td>
<td>231</td>
</tr>
<tr>
<td>SD</td>
<td>9.67</td>
<td>9.25</td>
</tr>
<tr>
<td>Alpha</td>
<td>.89</td>
<td>.89</td>
</tr>
</tbody>
</table>

Reliability and Validity of the State-Trait Anxiety Inventory

Table 6 contains test-retest reliability data for the normative sample of undergraduate college students.

Table 6
Test-Retest Reliability for College Undergraduates

<table>
<thead>
<tr>
<th>Time Lapse:</th>
<th>1 hour N</th>
<th>T/R</th>
<th>20 day N</th>
<th>T/R</th>
<th>104 day N</th>
<th>T/R</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Trait</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>88</td>
<td>.84</td>
<td>38</td>
<td>.86</td>
<td>25</td>
<td>.73</td>
</tr>
<tr>
<td>Females</td>
<td>109</td>
<td>.76</td>
<td>75</td>
<td>.76</td>
<td>22</td>
<td>.77</td>
</tr>
<tr>
<td>A-State</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>88</td>
<td>.33</td>
<td>38</td>
<td>.54</td>
<td>25</td>
<td>.33</td>
</tr>
<tr>
<td>Females</td>
<td>109</td>
<td>.16</td>
<td>75</td>
<td>.27</td>
<td>22</td>
<td>.31</td>
</tr>
</tbody>
</table>


The students retested after one hour were successively exposed during the test-retest interval to the following experimental conditions: a brief period of relaxation training; a difficult IQ test; and a film that depicted accidents resulting in serious injury or death.

As may be noted, the test-retest correlations for the A-Trait scale were reasonably high, ranging from .73 to .86 while those for the A-State scale were relatively low, ranging from .16 to .54, with a median r of only .32 for the six subgroups. The low r's for the A-State scale were anticipated, of course, because a valid measure of A-State should reflect the influence of unique situational factors existing at the time of testing. (Spielberger et al, 1970, p. 9)
The alpha coefficients (K-R 20, Cronbach, 1951) found in Table 5 indicate that the internal consistency of both State-Trait Anxiety Inventory subscales is reasonably good. (Reliability coefficients, including those for the freshmen and high school students, ranged from .83 to .92 for A-State and .86 to .92 for A-Trait.) Further evidence of the internal consistency of the State-Trait Anxiety Inventory has been documented by computing item-remainder correlations for the normative samples of high school students. The median A-State item-remainder correlation was .55 for the high school students, .45 for the college freshmen, and .55 for the college undergraduates. The corresponding A-Trait item-remainder correlations were .54, .46, and .53, respectively.

Regarding concurrent validity of the A-Trait scale, it has been found to have correlations of .75, .80, and .52 with the IPAT Anxiety Scale (Cattell & Scheier, 1963), the Taylor Manifest Anxiety Scale and the Affect Adjective Checklist (Zuckerman, 1960), respectively—this, for a group of 126 college females. For a group of 80 college males, it has had correlations of .76, .79, and .52, respectively.

Spielberger et al. also present evidence bearing on the construct validity of the A-State scale. The reader is referred to the manual for this and additional studies regarding the reliability and validity of this instrument. In reviewing the State-Trait Anxiety Inventory, Katkin (1978) writes in the Eighth Mental Measurements Yearbook:

Research with the STAI has been proliferating to the point where there is probably more published research on the STAI and more ongoing research now on the STAI, than on any other commercially available anxiety inventory....the STAI scale
represents a relatively efficient, reliable, and valid way to assess individual differences in both anxiety-proneness and phenomenological experience of anxiety in normal...populations. (p. 1096)

**Taylor Manifest Anxiety Scale**

The Taylor Manifest Anxiety Scale also referred to as the Manifest Anxiety Scale and the A scale, is the most prominent and popular of the MMPI scales developed for the measurement of anxiety (McReynolds, 1968). Developed by Janet Taylor, later Janet Taylor Spence, this instrument consists of 50 MMPI items (some items have been rewritten in order to improve their readability) that elicit responses to questions dealing with physiological signs or correlates of anxiety as experienced by the individual, chronic affective states described by such words as "apprehension" or "anxiety," anxiety-producing cognitions, and interpersonal attitudes commonly found in the anxious clinical patient (Lazarus, 1966). The main criterion for the selection of items in this instrument was that the items should conform, in the opinion of expert judges, with Cameron's (1947) definition of chronic anxiety. Sample Taylor Manifest Anxiety Scale items are: "My sleep is restless and disturbed.", "I am not at all confident of myself."

To complete the Taylor Manifest Anxiety Scale subjects are asked to respond with "true" or "false" to each item. The completed instrument is then compared against a key that indicates how an anxious individual would respond to each item. The score is obtained by totaling the number of items the subject has in agreement with the key. To identify levels of anxiety within a group, scores are arranged in
numerical order and then the top and bottom 20 percent are designated as high and low anxious, respectively.

**Reliability and Validity of the Taylor Manifest Anxiety Scale**

The reliability of the Taylor Manifest Anxiety Scale has been shown to vary between .81 and .96 (Hilgard, Jones, & Kaplan, 1951; Spence & Taylor, 1951; Taylor, 1951).

Taylor (1953) found a Taylor Manifest Anxiety Scale test-retest reliability of .89 over a three-week period, while Rankin (1963) obtained an internal consistency reliability (K-R 21) of .81. According to Kendall (1954), it is safe to conclude that adequate reliability has been demonstrated.

Several validity studies have demonstrated that the Taylor Manifest Anxiety Scale correlates substantially with clinical estimates of anxiety (Buss, Weiner, Durkee, & Baer, 1955; Gleser & Ulett, 1952; Hoyt & Magoon, 1954; Zuckerman, Persky, Eckman, & Hopkins, 1967). In 1966, Kelly indicated that the Taylor Manifest Anxiety Scale differentiated significantly normals, mixed neurotics, and anxiety patients. Kausler, Trapp, and Brewer (1959) found a significant relationship between decision time variability, presumably an indicant of anxiety, and Taylor Manifest Anxiety Scale responses.

Studies by Brackbill and Little (1954) and Miller, Fisher, and Ladd (1967) found the Taylor Manifest Anxiety Scale to correlate in the .80's or low .90's with the Psychasthenia (Pt) scale of the MMPI. In the Brackbill-Little study the obtained correlation was .92 for a group of 106 male patients of a Veterans Administration neuropsychiatric
hospital. The correlation for the second, or "normal," group in this study was significantly lower than in the hospital group--.81. The Miller et al study found a correlation of .83 between the Taylor Manifest Anxiety Scale and the Pt scale. McReynolds (1968) reports that the Taylor Manifest Anxiety Scale also correlates in the .80's with the Edwards Social Desirability Scale.

Discussion of Treatments

The first part of Session 1 for the Rational Emotive Therapy (RET) group and the Professional Support Group (PSG) were identical (see Appendixes G and H for an outline of the treatments). First, subjects completed the A-State scale of the State-Trait Anxiety Inventory. This instrument was completed by subjects in both groups at the beginning of each of the ensuing sessions also. Then subjects were presented with a theory of teacher stress that also included a discussion of terms and their definitions related to stress. Also included in the first part of Session 1 was an audio-visual presentation and lecturette on the physiological aspects of stress. The remainder of Session 1 and the following five sessions were geared to the specific stress management technique of the two groups.

Rational Emotive Therapy

The second part of Session 1 for the RET group began by focusing on the relationship between: (1) basic assumptions, beliefs, values, attitudes; (2) cognitions; and (3) stress. This served as an introduction to RET as a stress management technique. Examples were
used to illustrate the RET premise that thinking produces feelings that generate actions. A brief presentation of the nature of man from an RET perspective followed (Morris & Kanitz, 1975). Session 1 concluded with an introduction of the ABCDE analytical process of RET as well as the assigning of homework (see Appendix I for the homework assignment used in each of the following sessions).

The ABCDE analysis essentially requires an individual to analyze a situation (stressor) (A) in terms of the self-verbalizations (B) regarding the situation. It is the self-verbalizations that result in the affect or emotion (C) associated with the situation. If the individual finds that the emotion is inhibiting in some way, s/he may examine the self-verbalizations to discover and dispute (D) the irrational beliefs that are present. Such disputing will allow the individual to replace the irrational beliefs with more rational beliefs and will result in a more positive or less inhibiting cognitive, affective, behavioral effect (E).

Beginning with Session 2 and continuing into Session 3 subjects were introduced to and discussed Ellis' (1975) irrational beliefs. The irrational beliefs are:

1. The idea that it is a dire necessity for an adult to be loved or approved by almost everyone for virtually every thing he does.

2. The idea that one should be thoroughly competent, adequate, and achieving, in all possible respects.

3. The idea that certain people are bad, wicked, or villainous and that they should be severely blamed and punished for their sins.
4. The idea that it is terrible, horrible, and catastrophic when things are not going the way one would like them to go.

5. The idea that human unhappiness is externally caused and that people have little or no ability to control their sorrows or rid themselves of their negative feelings.

6. The idea that if something is or may be dangerous or fearsome, one should be terribly occupied with and upset about it.

7. The idea that it is easier to avoid facing many life difficulties and self-responsibilities than to undertake more rewarding forms of self-discipline.

8. The idea that the past is all-important and that because something once strongly affected one's life, it should indefinitely do so.

9. The idea that people and things should be different from the way they are and that it is catastrophic if perfect solutions to the grim realities of life are not immediately found.

10. The idea that maximum human happiness can be achieved by inertia and inaction or by passively and uncommittedly "enjoying oneself."

During Session 3 and continuing into Session 4 subjects were introduced to and discussed Burns' (1980) cognitive distortions. These distortions are:


2. OVERGENERALIZATION: A single negative event is seen as a never-ending pattern of defeat.

3. MENTAL FILTER: Pick out a single negative detail and dwell on it exclusively so that all of reality becomes darkened, like the drop of ink that discolors the entire beaker of water.

4. DISQUALIFYING THE POSITIVE: Rejecting positive experiences by insisting they "don't count" for some reason or other.
5. **JUMPING TO CONCLUSIONS**: Making a negative interpretation even though there are no definite facts that convincingly support a conclusion;

   a. **Mind Reading.** Arbitrarily concluding that someone is reacting negatively and not bothering to check it out.

   b. **The Fortune Teller Error.** Anticipating that things will turn out badly, and feeling convinced that a prediction is an already-established fact.

6. **MAGNIFICATION (CATASTROPHIZING) OR MINIMIZATION**: Exaggerating the importance of things (such as your "goof-up" or someone else's achievement), or inappropriately shrinking things until they appear tiny (your own desirable qualities or the other fellow's imperfections). This is also called the "binocular trick."

7. **EMOTIONAL REASONING**: Assuming that negative emotions necessarily reflect the way things really are: "I feel it, therefore it must be true."

8. **SHOULD STATEMENTS**: Trying to motivate with shoulds and shouldn'ts. "Musts" and "oughts" are also offenders. The emotional consequence is guilt. When we direct should statements toward others, we may feel anger, frustration, and resentment.

9. **LABELING AND MISLABELING**: An extreme form of overgeneralization. Instead of describing our errors, we may attach a negative label to ourselves: "I am a loser." When someone else's behavior rubs us the wrong way, we may attach a negative label to him: "He's a no good louse." Mislabling involves describing an event with language that is highly colored and emotionally loaded.

10. **PERSONALIZATION**: Seeing yourself as the cause of some negative external event which in fact you were not primarily responsible for.

Similarities between Ellis' irrational beliefs and Burns' cognitive distortion were noted. Throughout these three sessions subjects referred to and discussed the homework they were doing.
The ABCDE analysis, irrational beliefs, and cognitive distortions were applied to specific experiences subjects were having. This process continued through Sessions 5 and 6.

**Professional Support Group**

The second part of Session 1 for the Professional Support Group began by focusing on the relationship between the teacher's on-the-job responsibilities and experiences and stress. Next, the notion of social support as an element contributing to an individual's ability to cope with stress was introduced. This was followed by specifically focusing on the role of the professional support group as a stress management technique. Included was the definition of the professional support group, the three kinds of help the members of such a group offer to and receive from each other, and the format for PSG sessions (see Definition of Terms for the definition of a professional support group and a delineation of the three kinds of help.) Subjects then participated in a get-acquainted activity designed to encourage a sense of group cohesiveness. Session 1 concluded with subjects being asked to consider during the rest of the week professional topic areas they would like to have on the agendas for the remaining sessions; the determination of these topic areas would be one of the first items on the agenda for Session 2.

The format (Kirschenbaum & Glaser, 1978) for the remaining five sessions was as follows:

1. Introductory Circle Activity. An activity in self-disclosure allowing the group to gain some understanding
of each group member, to make the transition from the day's concerns to the present group setting, and to help re-establish a sense of group cohesiveness.

2. Revolving Focus Time. A portion of the session during which any member wanting the group's input regarding a particular area of professional concern may have it.

3. Open Meeting. A time for sharing resources, making announcements, identifying future topics, and following up on past ideas and suggestions.

4. Closing. A structured activity designed to bring closure to the session, e.g., each member describing something personal or professional s/he is looking forward to in the near future or expressing appreciation of something about the person sitting on one's right side.

Control Group

During the six weeks of treatment for the above groups the subjects of the Control Group completed and mailed to the investigator the A-State scale of the State-Trait Anxiety Inventory. For those desiring graduate credit, as well as those who wanted training in stress management but not graduate credit, four 3-hour sessions were held on consecutive days during the second week following posttests. Those subjects participating in these sessions were presented with the same information as was presented to both the RET and PSG groups.
Analysis of the Data

This study proposed to determine if there is a significant difference in measured anxiety between teachers who receive instruction in the principles of Rational Emotive Therapy as a stress management technique, teachers who participate in a Professional Support Group as a stress management technique, and teachers who receive no instruction.

To test this hypothesis data were analyzed using a one-factor multivariate analysis of covariance. This statistical analysis was selected to compensate for a lack of original equivalency between the treatment groups that was discovered after administration of the pretests. The variables in this analysis consisted of the following:

(a) One independent variable having three levels--Treatment Group 1, RET; Treatment Group 2, PSG; and Treatment Group 3, Control.

(b) Two dependent variables--the posttest scores on the A-Trait scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale.

(c) Three covariates--scores on the Schedule of Recent Experience and the pretest scores on the A-Trait scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale.

The test of significance for this one-factor multivariate analysis of covariance was Wilks' lambda and approximate F test
for the test of difference between adjusted group centroids
(A-Trait scale and the Taylor Manifest Anxiety Scale are considered
simultaneously in linear combination) at $p > .05$.\(^4\)

**Summary**

This chapter began with a discussion of the research design
for this study followed by a discussion of the study's population
and sample. A discussion of the data collection instruments and
studies regarding their reliability and validity was also included.
Next, there was a discussion of the treatments used in the study.
The chapter concluded with an outline of the variables and the
test of significance for the one-factor multivariate analysis of
covariance used in the data analysis.

\(^4\)The probability of rejecting a true null hypothesis is less than 5 in
100 chances.
CHAPTER IV
PRESENTATION AND ANALYSIS OF THE DATA

The purpose of this study was to examine the efficacy of instructing teachers in stress management techniques. Specifically, the study proposed to answer the following question:

Is there a difference in measured anxiety between teachers who receive instruction in the principles of Rational-Emotive Therapy as a stress management technique, teachers who participate in a Professional Support Group as a stress management technique, and teachers who receive no instruction?

To answer this question, a randomly selected group of teachers who elected to participate in the study were randomly assigned to one of three treatment groups. Pretest and posttest data were obtained through administration of the A-Trait Scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale. At pretest the Schedule of Recent Experience was administered; the results were used to control for the effect of recent life events that may have contributed to subjects' anxiety levels.

This chapter contains a description of the subjects in the sample and the presentation and analysis of the data obtained from them. It concludes with a summary of the analysis.
Description of the Sample

The subjects in this study consisted of a group of 27 teachers composed of four white males, one black male, 18 white females, and four black females. Additional demographic information was obtained by the subjects' completion of an information sheet (Appendix E).

Table 7 contains information regarding the subjects' teaching assignments by grade and subject area.

Table 7

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Subject Area</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>---------</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>---------</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
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<td>4</td>
<td>---------</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>---------</td>
<td>2</td>
</tr>
<tr>
<td>4-5</td>
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</tr>
<tr>
<td>6</td>
<td>Mathematics and Reading</td>
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</tr>
<tr>
<td>6</td>
<td>Language Arts and</td>
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<tr>
<td></td>
<td>Social Studies</td>
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</tr>
<tr>
<td>7</td>
<td>Earth Science</td>
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<td>7</td>
<td>Language Arts and</td>
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<tr>
<td></td>
<td>Reading</td>
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<tr>
<td>7</td>
<td>Language Arts, Reading, and</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Social Studies</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>6-8</td>
<td>Career Education</td>
<td>1</td>
</tr>
<tr>
<td>6-8</td>
<td>Student Support</td>
<td>1</td>
</tr>
</tbody>
</table>

As can be seen from this table, 18 of the subjects were at the elementary level, grades one through five, while nine were at the
middle school level. With the exception of the Title 1 Math teacher and the Student Support teacher, all subjects had regular classrooms.

Information regarding years of teaching experience and age is displayed in Table 8 and Table 9, respectively. It is evident from the data there that the subjects of this study were experienced, older teachers.

Table 8
Subjects' Years of Teaching Experience

<table>
<thead>
<tr>
<th>Years</th>
<th>Number</th>
</tr>
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<tbody>
<tr>
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</tr>
<tr>
<td>6-10</td>
<td>3</td>
</tr>
<tr>
<td>11-15</td>
<td>9</td>
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<td>16-20</td>
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</tr>
<tr>
<td>26-30</td>
<td>1</td>
</tr>
<tr>
<td>31 plus</td>
<td>1</td>
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</tbody>
</table>

Table 9
Age Ranges of Subjects

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Number</th>
</tr>
</thead>
<tbody>
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<td>25-29</td>
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<tr>
<td>30-34</td>
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<td>35-39</td>
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<td>50-54</td>
<td>3</td>
</tr>
<tr>
<td>55-59</td>
<td>2</td>
</tr>
</tbody>
</table>
Analysis of the Data

The presentation of the data analysis for this study is divided into two sections:

(1) Presentation and discussion of instrument data collected from subjects;

(2) Presentation and discussion of the statistical analysis of the data.

Presentation and Discussion of Instrument Data Collected from Subjects

Table 10 displays the means and standard deviations of subjects' scores on the Schedule of Recent Experience by treatment groups. This instrument, which was used to control for life events that may contribute to subjects' anxiety levels, served as one of the covariates in the statistical analysis of the data. An examination of the data in Table 10 reveals a wide range of variation both within and between the three treatment groups on this instrument.

Table 10
Means and Standard Deviations of Schedule of Recent Experience

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>RET</td>
<td>356.13</td>
<td>398.88</td>
<td>8</td>
</tr>
<tr>
<td>PSG</td>
<td>460.29</td>
<td>317.18</td>
<td>7</td>
</tr>
<tr>
<td>Control</td>
<td>336.00</td>
<td>198.71</td>
<td>12</td>
</tr>
</tbody>
</table>

Tables 11 and 12 display the means and standard deviations of the subjects' pretest and posttest scores by treatment groups on the
A-Trait scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale, respectively. As has been mentioned, the data in these tables indicate that there was some difference between the three groups' pretest mean scores on the two measures of anxiety. Further examination of the data in these tables reveals a wide range of variation both within but especially between the three treatment groups.

Table 11
Means and Standard Deviations of A-Trait

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Pre</th>
<th>Post</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
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<tr>
<td>RET</td>
<td>8</td>
<td>39.50</td>
<td>7.05</td>
</tr>
<tr>
<td>PSG</td>
<td>7</td>
<td>38.14</td>
<td>14.72</td>
</tr>
<tr>
<td>Control</td>
<td>12</td>
<td>40.08</td>
<td>11.04</td>
</tr>
</tbody>
</table>

Table 12
Means and Standard Deviations of TMAS

<table>
<thead>
<tr>
<th></th>
<th>N</th>
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<th>Post</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>RET</td>
<td>8</td>
<td>14.25</td>
<td>6.58</td>
</tr>
<tr>
<td>PSG</td>
<td>7</td>
<td>18.86</td>
<td>13.50</td>
</tr>
<tr>
<td>Control</td>
<td>12</td>
<td>17.50</td>
<td>9.66</td>
</tr>
</tbody>
</table>
Because of the large differences between the standard deviations for the three groups on measured anxiety and to further explicate other differences, the individual pretest and posttest scores on the A-Trait scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale for each of the treatment groups were graphed. These may be found in Figures 2 through 7.
Figure 2. RET A-Trait Scale Scores
Figure 3. PSG A-Trait Scale Scores
Figure 4. Control A-Trait Scale Scores
Figure 5. RET TMAS Scores
Figure 6. PSG TMAS Scores
Figure 7. Control TMAS Scores
Figure 2 shows that four Rational Emotive Therapy subjects, i.e., Subjects 2, 5, 7, and 8, decreased in anxiety as measured by the A-Trait scale of the State-Trait Anxiety Inventory with Subject 5 moving from a score of 45 at pretest to 28 at posttest. The change exhibited by this subject’s scores accounts for much of the variance in this group. (Appendix F displays scores for all subjects on each of the instruments.) Subjects 1, 3, 4, and 6 increased in A-Trait anxiety although their increases were not as marked as the decreases of the other four subjects.

Information in Figure 3 shows that three subjects in the Professional Support Group, Subjects 9, 11, and 14, decreased in A-Trait measured anxiety with Subject 14 having the greatest reduction in measured anxiety. The remaining four subjects, however, had slight increases in measured anxiety from pretest to posttest. Of particular note is the large gap between Subjects 13 and 14 and the remainder of the subjects in this group. Further, Subject 9, whose measured anxiety was 23 at pretest, was 44 points lower than Subject 14 at pretest. Posttest scores for these two subjects were similarly disparate.

Figure 4 displays A-Trait anxiety scores for the control group. As in the Professional Support Group, this group had a wide range in scores on both the pretests and posttests for A-Trait Anxiety. Six subjects (numbers 16, 17, 18, 19, 23, and 27) showed a decrease in measured anxiety with Subjects 17 and 18 having the largest decreases. Subjects 20, 22, and 24 remained the same while Subjects 21, 25, and 26 had slight increases in A-Trait anxiety.
Figures 5 through 7 display subjects' pretest and posttest scores by treatment group on the Taylor Manifest Anxiety Scale. Raw scores on this instrument can range from zero to 50. Five subjects in the Rational Emotive Therapy group, Figure 5, decreased from pretest to posttest while one subject stayed the same and two increased. Of the three treatment groups, this one had the smallest range in scores on both pretest and posttest.

Figure 6, displaying scores for the Professional Support Group, indicates that four subjects decreased in Taylor Manifest measured anxiety, one stayed the same, and two increased. The score of Subject 14 accounts for much of the variance at pretest; this subject's score and that of Subject 13 account for much of the variance at posttest.

Nine subjects in the control group, Figure 7, decreased in measured anxiety on the Taylor Manifest Anxiety Scale. One subject stayed the same and two increased. The scores of Subjects 19, 21, and 22 account for much of the variance at both pretest and posttest on this anxiety measure.

An examination of subjects across groups reveals that the seven subjects (Subjects 7, 13, 14, 19, 21, 22, and 23; 25 percent of the total sample) who had the highest A-Trait scale scores at pretest were also the highest at posttest. Subject 4 had the same score as Subject 7 at posttest, resulting in eight subjects, 29.6 percent of the total sample, being the highest in posttest A-Trait scale measured anxiety.
Looking at subjects across groups on the Taylor Manifest Anxiety Scale reveals that Subjects 7, 10, 13, 14, 16, 19, 21, and 22 (29.6 percent of the total sample) were highest in pretest measured anxiety. Seven of these subjects were also among the highest at posttest (Subjects 3, 7, 13, 14, 16, 19, 21, 22). Five subjects, Subjects 13, 14, 19, 21, and 22, were consistently high in measured anxiety throughout this study.

Presentation and Discussion of the Statistical Analysis of the Data

A Wilks' lambda was computed to test the hypothesis that the groups differed on A-Trait and Taylor Manifest Anxiety Scale measured anxiety adjusted on the basis of the covariates—the Schedule of Recent Experience and the A-Trait scale and Taylor Manifest Anxiety Scale pretests. The results of this analysis are presented in Table 13.

Table 13

<table>
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<tr>
<th>Wilks' Lambda</th>
<th>Approximate F</th>
<th>Hypothesis DF</th>
<th>Error DF</th>
<th>Significance</th>
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</thead>
<tbody>
<tr>
<td>.964</td>
<td>.185</td>
<td>4</td>
<td>40</td>
<td>95</td>
</tr>
</tbody>
</table>

The Wilks' lambda of .964 yields a significance level of .95, which far exceeds the a priori level of .05. This resulted in failure to reject the null hypothesis that there is no difference between the group centroids of the two anxiety measures in the population.
Summary

To summarize, this study examined the difference in measured anxiety between teachers who received instruction in two stress management techniques, Rational Emotive Therapy and Professional Support Group, and those who did not. From a population of 1,843 elementary and middle school teachers, 250 were randomly selected to receive a letter inviting them to participate in this study. Ultimately, 28 teachers elected to participate and were randomly assigned to one of three groups. Pretest and posttest anxiety measures, A-Trait scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale, were obtained for the three groups. To control for the contribution of recent life events to measured anxiety, the Schedule of Recent Experience was administered at the time of pretesting. Between the administration of the pretest and posttest instruments, two groups were exposed to and practiced the principles of Rational Emotive Therapy and Professional Support Group, respectively. The third group served as a control with no exposure to treatment. Since one subject had incomplete data, data from 27 subjects were analyzed. Analyses of the data revealed no significant difference (F = .185; df = 4/40 p > .95) between the group centroids of the two anxiety measures in the population.
CHAPTER V
SUMMARY, CONCLUSIONS, RECOMMENDATIONS

The rationale for this investigation was based on the paucity of teacher stress research examining stress management techniques teachers may employ in attempting to reduce the effect of stressors in their lives. It is true that considerable research into teacher stress has been conducted over the past five decades yielding a wealth of data concerning the incidence and sources of teacher stress. Further, studies of a number of occupational groups are exploring the relationship between the experience of stress and both the resulting short term and long term effects. However, little attention has been given to the area of coping strategies for teachers. Therefore, this study was conducted.

Summary of Study

The purpose of this study was to examine the efficacy of instructing teachers in stress management techniques. Specifically, the study examined the difference in measured anxiety between teachers who received instruction in the principles of Rational Emotive Therapy as a stress management technique, teachers who participated in a Professional Support Group as a stress management technique, and teachers who received no instruction.
The need for such a study was suggested in the introduction to this investigation. Teaching has become such a stressful profession that many educators are experiencing physical and/or emotional health problems. Teacher absenteeism and turnover, correlates of teacher stress, are increasing rapidly.

Even as recently as September 1982, the results of a mail survey conducted among public school teachers in the state of New York by *The New York Times* (Fiske, 1982) were headlined as revealing morale problems, an additional correlate of teacher stress (McLean, 1979). In conducting the survey, *The Times* sent questionnaires to 13,623 teachers throughout the state. Surveys were returned by 5,702 teachers. This response rate of 42 percent is an unusually high response for a mail survey. Of particular note was the fact that while two-thirds of those responding said they were proud to be teachers, nearly half, 47 percent, said they would go into another profession if they had it to do over again.

Because of the authority position that teachers hold in the classroom and the possible influence that they have on students, it is important for teachers to maintain positive mental health. However, in light of increasing teacher absenteeism and turnover as well as sagging teacher morale, one may speculate that the mental health of teachers in general is being affected. Further evidence for this comes from the fact that studies examining the incidence of teacher stress have found as many as 86 to 92 percent of the samples involved to consider their job environments as mildly to extremely stressful. This, combined with
data indicating that nearly 50 percent of some teachers sampled would not enter teaching if they had it to do over again, leads one to question the level of positive teacher mental health in the U.S.

When the sources of teacher stress and anxiety have been explored, they have included environmental factors such as inadequate or insufficient facilities and resources; organizational factors such as role conflict, role ambiguity, and exclusion from the decision-making process; interpersonal factors such as relationship problems with students, staff, and parents; and intrapersonal factors such as lack of prestige and feelings of inadequacy and self-doubt.

Studies specifically investigating the efficacy of various interventions in reducing teacher stress and anxiety have been few. Those that have been conducted have shown contradictory and ambiguous findings (Coates & Thoresen, 1976). In terms of the effect of teacher stress and anxiety on teacher and student behavior, it remains to be determined whether they are detrimental or beneficial to teachers and students. Review of the literature on teacher stress and anxiety—the incidence and sources of, methods to reduce, and effects of—led to the design of this study examining the efficacy of instructing teachers in stress management techniques.

The population for this study consisted of 1,843 elementary and middle school teachers having direct student contact in a major midwestern U.S. desegregated urban public school system. A random sample of 250 teachers from this population received a letter inviting them to participate in this study. Ultimately, 28 teachers elected to
participate. They were randomly assigned to one of three treatment groups—Rational Emotive Therapy, Professional Support Group, and Control Group. Pretest and posttest anxiety measures were obtained using the A-Trait scale of the State-Trait Anxiety Inventory and the Taylor Manifest Anxiety Scale. At pretest the Schedule of Recent Experience was also administered to control for the effect of life events that may contribute to anxiety level. Between pretest and posttest subjects in the Rational Emotive Therapy group and the Professional Support Group were exposed to and practiced the theory and skills associated with the particular approach of their respective groups over a period of six weeks, two hours per week. The control group received no instruction until after posttest data were collected. A one-factor multivariate analysis of covariance was used to analyze the data obtained from subjects on the anxiety measures.

Finding

There was no significant difference between the group centroids of the two anxiety measures in the population.

Conclusions

The following conclusions are drawn from this study:

1. The small number of subjects finally participating in this study indicates that a larger pool of subjects may need to be contacted to obtain a sufficient number of subjects who are willing to devote the amount of time necessary to conduct effective experimental research in this area.
2. Instructional techniques to reduce teacher stress such as Rational Emotive Therapy and Professional Support Group may not be useful to some teachers in trying to cope with the stress of teaching.

3. As stated in the review of the role of the teacher in reducing anxiety, only the individual teacher can ultimately diagnose and resolve stress. There are many more techniques for managing stress than the two used in this study. The individual's being able to select the technique best suited to him/her may be an important element in stress reduction.

Recommendations for Future Research

In view of the limitations and findings of this study it is recommended that the following research be conducted:

1. Replication of this study with a sample size that permits the use of blocking of subjects on high, medium, and low anxiety levels as measured at pretest.

2. Replication of this study with a sample size that permits the use of the Solomon (1949) Four-Group Design.

3. A study designed to include a variety of stress management techniques from which subjects may select the technique best suited to them after all techniques have been explained to them; such a study should consider both individual and group approaches.
4. A study of the efficacy of stress management techniques using a case study approach that may permit a more indepth qualitative, as well as quantitative, analysis of the individual subjects.

5. Periodic follow-up activities with the sample of this present study to determine the effectiveness of instruction in Rational Emotive Therapy and Professional Support Group as stress management techniques; follow-up to also include monitoring of subjects' physical symptoms as they might be predicted by the Schedule of Recent Experience.

6. Studies designed to examine teacher anxiety and its effect on both teachers and students.

**Summary**

In conclusion, the purpose of this study was to examine the efficacy of instructing teachers in stress management techniques. Two groups of teachers were exposed to and practiced the theory and principles of Rational Emotive Therapy and Professional Support Group, respectively. A third group received no instruction. The findings of this study revealed no significant difference between the three groups upon the conclusion of treatment.
APPENDIX A

Letter Inviting Participation in Study
PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

117 (comic)

123-124

129-131

145-146
March 4, 1982

Dear

Are you interested in receiving three hours of graduate credit at OSU in exchange for your participation in a course designed to study the remediation of stress, particularly teacher stress? Before answering this question please read the enclosed information. We believe that a careful reading of this information will affirm for you that an interesting and exciting opportunity is available to you.
-Fifth grade teacher, Betty Robinson, missed seven weeks of school late last year— the result of "MENTAL FATIGUE".

-Georgia Thompson has "COLITIS" and 33 third graders to work with daily.

-John Martin "YELLS" at his eighth grade science class at the least provocation.

-Louise Turner "RESIGNED" as a middle school social studies teacher to become a flight attendant with a major airline. (Not a bad idea, you say!)

Many of us do not end up like Betty or suffer like Georgia; most of us probably do not yell at our students—very often. A lot of us "dream" of doing something like Louise. In fact, on an average, 10% of us are leaving the profession yearly. Nearly 50% of those who enter teaching tend to leave within ten years of their entering—most of these within the first two or three years.

Teacher absenteeism is on the increase. Why? Many researchers— including education associations and unions, as well as retirement systems—are finding that teacher stress accounts for increased teacher turnover and increased absenteeism.

Numerous studies have examined the incidence of teacher stress and identified those factors which teachers believe are the sources of this stress. Considerably fewer studies have investigated the effects of stress on teachers and teacher stress on students. Even fewer studies have examined how to help teachers cope with the "stressors" they confront on the job.

During the past four years Terry Wilson has had the opportunity to conduct numerous sessions with classroom teachers on many aspects of stress including strategies which are thought to be useful in coping more effectively with stress. In these sessions he has been heartened and disheartened, challenged, elated, and frustrated. Some teachers have admitted their loss of enthusiasm, joy, and excitement in teaching as compared to their first years of teaching. Happily, other teachers have expressed increased "love" of teaching and pleasure in working with students.

In an effort to offer you an opportunity to expand your repertoire of coping skills and/or those of our colleagues, we want to propose to you the following:

- the opportunity to become a participant with other teachers in a study which will provide new information into the literature on teacher stress.

-three hours of graduate credit in Education—Special Services: Guidance and Counseling, course number 727.
-your participation in several two-hour sessions during Spring and Summer Quarters, 1982.

-your participation during the two-hour sessions will include the taking of various instruments, such as the Taylor Manifest Anxiety Scale, the State-Trait Anxiety Inventory, and the Teaching Anxiety Scale; we will then interpret your results to you.

-a limited amount of reading and writing on your time, with the majority of the work being accomplished during the sessions.

-a challenging and stimulating opportunity for you to be involved in what we think will be an interesting course and research project.
A meeting to provide you with very specific information about this opportunity to expand your repertoire of coping skills and to gain three hours of graduate credit, as generally outlined, will be held as follows:

Date: Wednesday, March 24, 1982

Time: 7:00 to 9:00p.m.

Place: Ohio State University, 257 Arps Hall

If you have any questions, the answers to which may help you in your decision to attend the meeting (and participate in this course), please call Terry Wilson at:

444-8214 between 4:45p.m. and 11:00p.m.  
276-6361 between 8:30a.m. and 3:30p.m.

Attendance at the informational meeting in no way obligates you to participate in the study.

Please complete the enclosed sheet, place it in the pre-addressed, postage-paid envelope and return it to us by March 16. Thank you.

Sincerely,

Dr. Susan Sears  
Assistant Professor  
Education—Special Services

Terry Wilson  
Ph. D. Candidate  
Education—Special Services

P.S.: You may be wondering how you were chosen to receive this letter. You were randomly selected from a list of Columbus Public Schools classroom teachers.
We would appreciate your completing this sheet and returning it to us by March 16. Please check those items which apply to you. Thank you.

____ 1. I plan to attend the information meeting.

____ 2. I would consider participating in this course but cannot attend the information meeting.

____ 3. My schedule does not permit me to enroll for this course.

____ 4. I am not interested in stress management at this time.

____ 5. I am not interested in obtaining graduate credit.

____ 6. Other (Please write a brief explanation.)

Name (Please print.) __________________________________________________________
APPENDIX B

Schedule of Recent Experience
APPENDIX C

State-Trait Anxiety Inventory
**SELF-EVALUATION QUESTIONNAIRE**

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

**STAI FORM X-1**

**NAME** ____________________________  **DATE** ____________________________

**DIRECTIONS:** A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Circle 1</th>
<th>Circle 2</th>
<th>Circle 3</th>
<th>Circle 4</th>
<th>Circle 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel calm</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I feel secure</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3. I am tense</td>
<td></td>
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<tr>
<td>4. I am regretful</td>
<td></td>
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<tr>
<td>5. I feel at ease</td>
<td></td>
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<td></td>
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<tr>
<td>6. I feel upset</td>
<td></td>
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<td></td>
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<tr>
<td>7. I am presently worrying over possible misfortunes</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>8. I feel rested</td>
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<td></td>
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<tr>
<td>9. I feel anxious</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>10. I feel comfortable</td>
<td></td>
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<tr>
<td>11. I feel self-confident</td>
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<tr>
<td>12. I feel nervous</td>
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<tr>
<td>13. I am jittery</td>
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<td></td>
<td></td>
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<tr>
<td>14. I feel “high strung”</td>
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<td></td>
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<tr>
<td>15. I am relaxed</td>
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<tr>
<td>16. I feel content</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>17. I am worried</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. I feel over-excited and “rattled”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I feel joyful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I feel pleasant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*CONSULTING PSYCHOLOGISTS PRESS*
*877 College Avenue, Palo Alto, California 94306*
SELF-EVALUATION QUESTIONNAIRE
STAI FORM X-2

NAME ______________________________________ DATE ____________________

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

21. I feel pleasant .................................................................................................................. 0 0 0 0
22. I tire quickly ...................................................................................................................... 0 0 1 0
23. I feel like crying ............................................................................................................... 0 0 1 0
24. I wish I could be as happy as others seem to be ............................................................ 0 0 0 0
25. I am losing out on things because I can't make up my mind soon enough ................ 0 0 0 0
26. I feel rested ...................................................................................................................... 0 0 0 0
27. I am “calm, cool, and collected” .................................................................................... 0 0 0 0
28. I feel that difficulties are piling up so that I cannot overcome them ......................... 0 0 0 0
29. I worry too much over something that really doesn't matter ...................................... 0 0 0 0
30. I am happy ..................................................................................................................... 0 0 0 0
31. I am inclined to take things hard .................................................................................... 0 0 0 0
32. I lack self-confidence ..................................................................................................... 0 0 0 0
33. I feel secure .................................................................................................................... 0 0 0 0
34. I try to avoid facing a crisis or difficulty ........................................................................ 0 0 0 0
35. I feel blue ....................................................................................................................... 0 0 0 0
36. I am content .................................................................................................................. 0 0 0 0
37. Some unimportant thought runs through my mind and bothers me ....................... 0 0 1 0
38. I take disappointments so keenly that I can't put them out of my mind ................. 0 0 0 0
39. I am a steady person ..................................................................................................... 0 0 0 0
40. I get in a state of tension or turmoil as I think over my recent concerns and interests .................................................................................................................. 0 0 0 0

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APPENDIX D

Taylor Manifest Anxiety Scale
APPENDIX E

Information Sheet
INFORMATION SHEET

Please print all information. Thank you.

1) Date __________________________

2) Name ____________________________________________
   Last    First    Middle

3) Address ____________________________________________
   Street

   City/State            Zip Code

4) Telephone ____________________________________________
   Home            Work

5) School ____________________________________________

6) Present teaching assignment ____________________________
   Grade/Subject area
7) Years of teaching experience (Check one.): 
- 1-5
- 6-10
- 11-15
- 16-20
- 21-25
- 26-30
- 31 plus

8) Age: 
- 20-24
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60 plus
APPENDIX F

Subjects' Scores on the Schedule of Recent Experience, A-Trait Scale of the State-Trait Anxiety Inventory, and the Taylor Manifest Anxiety Scale
APPENDIX F

Subjects' Scores on the Schedule of Recent Experience, A-Trait Scale of the State-Trait Anxiety Inventory, and the Taylor Manifest Anxiety Scale

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<thead>
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<th>Subject Number</th>
<th>SRE$^1$ Pretest</th>
<th>SRE$^1$ Posttest</th>
<th>A-Trait$^2$ Pretest</th>
<th>A-Trait$^2$ Posttest</th>
<th>TMAS$^3$ Pretest</th>
<th>TMAS$^3$ Posttest</th>
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$^1$Scores are in LCU's (Life-Change Unit)

$^2$Raw scores on the A-Trait scale may range from 20-80.

$^3$Raw scores on the Taylor Manifest Anxiety Scale may range from 0-50.
APPENDIX G

Outline of Sessions for Rational Emotive Therapy Group
APPENDIX G

Outline of Sessions for Rational Emotive Therapy Group

Session 1

Objectives:

1) To present a theory of teacher stress
2) To present information on what stress is
3) To introduce theory and process of RET (Morris & Kanitz, 1975)

Activities:

1) Lecturette on theory of teacher stress
2) Lecturette on what stress is
3) Introductory lecture on theory and process of RET including ABCDE analysis of cognitions and emotions

Session 2

Objectives:

1) To present information on irrational beliefs (Ellis & Harper, 1975)
2) To practice the ABCDE analysis of cognitions and emotions

Activities:

1) Lecturette on irrational beliefs
2) Discuss and work through homework assignment and ABCDE analysis
Session 3

Objectives:

1) To continue presentation of information on irrational beliefs
2) To introduce cognitive distortions (Burns, 1980)
3) To continue practicing the ABCDE analysis of cognitions and emotions

Activities:

1) Lecturette on irrational beliefs continued
2) Introductory lecturette on cognitive distortions
3) Discuss and work through homework assignment and ABCDE analysis

Session 4

Objectives:

1) To continue presentation of cognitive distortions
2) To continue practicing the ABCDE analysis of cognitions and emotions

Activities:

1) Lecturette on cognitive distortions continued
2) Discuss and work through homework assignment and ABCDE analysis

Session 5

Objectives:

1) To reinforce RET approach
2) To continue practicing the ABCDE analysis of cognitions and emotions

Activities:

1) Review RET approach
2) Discuss and work through homework assignment and ABCDE analysis
Session 6

Objectives:

1) To review theory and process of RET

2) To continue practicing the ABCDE analysis of cognitions and emotions

Activities:

1) Review RET approach

2) Discuss and work through homework assignment and ABCDE analysis
APPENDIX H

Outline of Sessions for Professional Support Group
APPENDIX H

Outline of Sessions for Professional Support Group

Session 1

Objectives:

1) To present a theory of teacher stress
2) To present information on what stress is
3) To introduce concept of Professional Support Group (Kirschenbaum & Glaser, 1978)

Activities:

1) Lecturette on theory of teacher stress
2) Lecturette on what stress is
3) Lecturette on Professional Support Group concept and format for remaining sessions
4) Get-acquainted activity--Positive Communication Exercise

Sessions 2-6

Objectives:

1) To expand one's thinking, be intellectually challenged, and gain new information and insights related to one's professional involvement--stimulating ideas
2) To learn new methods, practice old and new skills, solve problems, and receive suggestions--practical help
3) To realize a greater sense of support allowing one to feel less alone, to share discouragements, to appreciate successes, and to renew confidence and energy--sense of support
Activities:

1) Introductory Circle Activity
2) Revolving Focus Time
3) Open Meeting
4) Closing
APPENDIX I

RET Homework Assignment
APPENDIX J

Human Subjects Review Committee Letter of Approval
OHIO STATE UNIVERSITY
Social & Behavioral Sciences
Human Subject Review Committee
Research Involving Human Subjects

PROTOCOL NO. 2280047
ORIGINAL REVIEW
CONINUING REVIEW
FIVE-YEAR REVIEW

ACTION OF THE REVIEW COMMITTEE

With regard to the employment of human subjects in the proposed research entitled:
TWO STRATEGIES FOR DEALING WITH TEACHER STRESS

Susan Sears, Terry Wilson
Special Services

THE SOCIAL AND BEHAVIORAL SCIENCES REVIEW COMMITTEE HAS TAKEN THE FOLLOWING ACTION:

☐ Approved ☐ Disapproved
☑ Approved with conditions *
☐ Waiver of written consent granted

* Conditions stated by the Committee have been met by the investigator and, therefore, the protocol is approved.

It is the responsibility of the principal investigator to retain a copy of each signed consent form for at least four (4) years beyond the termination of the subject's participation in the proposed activity. Should the principal investigator leave the University, signed consent forms are to be transferred to the Human Subject Review Committee for the required retention period. This application has been approved for the period of one year. You are reminded that you must promptly report any problems to the Review Committee, and that no procedural changes may be made without prior review and approval. You are also reminded that the identity of the research participants must be kept confidential.

Date 4/2/1982
Signed: (Chairperson)

cc: Original - Investigator
File

HS-0258 (Rev. 7/81)
REFERENCE NOTES


LIST OF REFERENCES


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